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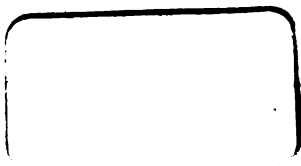
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FROM

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TWENTY-EIGHTH ANNUAL REPORT

RELATING TO THE

REGISTRY AND RETURN

OF

BIRTHS, MARRIAGES AND DEATHS

IN

MICHIGAN

FOR THE YEAR 1894

BY THE SECRETARY OF STATE OF THE STATE OF MICHIGAN



BY AUTHORITY

LANSING

ROBERT SMITH PRINTING CO., STATE PRINTERS AND BINDERS

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The State

AUTHORITY FOR PUBLICATION AND DISTRIBUTION.

HOWELL'S ANNOTATED STATUTES, SUPPLEMENT 1883-1890. SECTIONS 26g, 26j, AND 26n.
BEING SECTIONS 7, 10 AND 14 OF PUBLIC ACT NO. 122 OF 1899.

§26g. SEC. 7. That there shall be published a sufficient number of copies of the reports of the several officers, boards of officers, and public institutions of this State, now or hereafter required to make reports, not mentioned in sections eight, nine, ten and eleven of this act, and be bound together as joint documents of the fiscal or calendar year for which such reports are made, to supply the following persons, officers, libraries, corporations and societies, viz.: State officers and their deputies, ex-State officers, libraries of State officers, officers and libraries of State institutions, members and libraries of State boards, senators and representatives of this State in Congress, the United States senate library and the library of Congress, members of the legislature of the year for which said joint documents are published, justices of the supreme court, judges of the circuit courts, county clerks, county treasurers and judges of probate, public, free and incorporated libraries, public schools having a library, and publishers of newspapers published at that time in this State. That in addition to the foregoing there shall be published of said reports as joint documents, three hundred and fifty copies, one hundred and fifty copies of which shall be deposited in the State library for use in said library and for exchanges, and the remaining two hundred copies shall be deposited in the office of Secretary of State to supply future demands.

§26j. SEC. 10. That a sufficient number of copies of the annual report of the Secretary of State on births, marriages and deaths shall be printed and bound for distribution, in the same manner as the joint documents; also a sufficient number to supply the officers making returns of births and deaths compiled in said report or their successors in office with one copy each, for depositing one hundred and fifty copies in the State library for use in said library and for exchanges, two hundred copies in the office of the Secretary of State as in the case of the joint documents and two hundred copies in the office of the State board of health for distribution by said board in their discretion.

§26n. SEC. 14. That it shall be the duty of the Secretary of State to direct and oversee the prompt distribution of the laws, journals, documents, and reports mentioned in this act, whose distribution is not otherwise provided for: and said laws, journals, documents, and reports shall be shipped to the several county clerks in the State, and be distributed by them to the persons, officers, corporations, and societies within their respective counties entitled to the same, and that, until so distributed, they shall be carefully preserved by said county clerks. That the accounts for boxes furnished to the Secretary of State for package and distribution shall be audited and allowed by the board of State auditors and paid out of the State treasury, and the expense of transportation from the office of the Secretary of State to the county clerks, and of distribution by the county clerks to the persons entitled to the same shall be audited and allowed by the boards of supervisors and paid out of the county treasuries: *Provided, however,* That the Secretary of State may, in his discretion, personally deliver or ship directly to any of the persons, officers, corporations, or societies entitled to any book or books mentioned in this act.

Applications for this Report should be made directly to the Secretary of State, Lansing.

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LETTER OF TRANSMITTAL.

MICHIGAN,
DEPARTMENT OF STATE, }
Lansing, Jan. 6, 1897.

HON. HAZEN S. PINGREE, *Governor of Michigan:*

SIR—I hereby transmit, in accordance with law, the Twenty-eighth Annual Registration Report of Michigan, containing the statistics of the births, marriages and deaths that occurred in this State during the year 1894.

Like all of the preceding Registration Reports of Michigan, its issue is too tardy to render the statistics presented of immediate interest and practical use, except in a retrospective sense. While a special delay of several months has occurred in the case of the present Report on account of extra work in the State Printing Office, the chief responsibility for its late appearance belongs to the defective State registration law. The returns are not required to reach this Department until eight months after the close of the year registered.

Many criticisms have been made of the imperfections of the present law, which has remained upon the statute books without alteration or improvement since 1869. Great advances have been made in the meantime in our knowledge of the requirements of registration, and it therefore seems fitting that some action should be taken by the Legislature to place the collection of vital statistics upon a satisfactory basis. It is not necessary or desirable that any more money should be expended in this direction, but rather, by the substitution of a scientific and economical system for our present wasteful and imperfect one, we may obtain more timely and satisfactory data without additional cost.

In the Introductory Remarks of this and the immediately preceding Reports, a full account will be found of the specific imperfections of the present law, together with suggestions as to the essential features of an improved system. A committee of the State Medical Society, with the coöperation of the State Conference of Health Officers, will, I understand, present a bill for the immediate registration of deaths and the requirement of certificates of deaths throughout the State, as now in use in most of our cities under local ordinances. This bill has been carefully examined in this Department and compared with existing legislation in other States, and I feel sure that it would prove efficient and economical in operation.

Very respectfully,
WASHINGTON GARDNER,
Secretary of State.

INTRODUCTORY REMARKS.

The present Report is somewhat larger than that for the preceding year for the following reasons: (1) the data presented are those corresponding to the last State census year, 1894, and hence comparisons of the vital statistics with the population of the State are of special interest and value; the distinction of nationality has also been introduced in conformity with modern census methods to replace the very indefinite classification by general nativity; (2) an extended table showing the comparative results obtained by the State registration system and the State census enumeration of vital statistics (Table 17, pages 34 to 66), is presented, by the help of which the actual results of registration in each county, township, city and ward can be examined; (3) a valuable collection of divorce statistics, showing the great present importance and growing prevalence of divorces in Michigan, was placed at the service of the Department, and appears in Part III of the Report, in connection with the discussion of marriages (pages 167 to 179). The subject is of great public interest and considerable practical importance, and thanks are due to Mr. Root for the thorough manner in which he collected the data; (4) the Appendix contains a complete compilation of the Michigan laws relating to births, marriages, deaths and divorces—the latter added for the first time. This compilation will be found especially useful to clergymen, justices, county clerks, and others concerned in the execution of the marriage laws. Copies can be obtained in pamphlet form separate from this Report upon application to this Department.

The above reasons, while explaining a somewhat more extended discussion of the statistics of the year than that of the preceding one, will not hold in regard to the following Report, nor, in fact, in regard to any of the following Reports of this series until we reach the year of the next United States census, 1900. A considerable reduction in the volume of statistics presented can therefore be promised after the present year.

In fact, it has been the policy of this Department for several years past to weed out all useless tables, and such as had sufficiently served the original purposes for which they were instituted. Thus the space allotted to the subject of births was reduced from about 50 pages to about 30 pages; the tables relative to still-births, twins, illegitimates, and other subjects of minor importance have been greatly condensed; the cumbrous and antiquated nosological classification of causes of deaths, embracing about 160 titles, with the interminable and misleading "alphabetical list" which supplemented it, has been replaced by a condensed classification of only 76 titles, devised especially for practical use by the public health service. Of course, all of these changes could not be made instantaneously. The new tables must be strictly comparable with the old ones, in order that the continuity of data might be fully preserved. All that was valuable in old methods of presentation should be retained until better forms are thoroughly introduced and understood. It is believed that such changes have now been sufficiently accomplished, for the most part, so that the succeeding Report will admit of very considerable condensation without statistical loss.

DELAY IN PUBLICATION OF THIS REPORT.

The first "copy" for the present Report was sent to the State Printing Office in January, 1896, nearly a year ago, with the expectation that the work would be entirely printed and distributed by May 1, 1896. This, however, owing to the large demands made upon the State printer by the issue of the State census volumes, the bringing forward of certain delayed reports from other departments, and the delays incidental to removal of the printing plant, could not be accomplished. The last volume of these Reports (that for the year 1893) was issued more promptly than any of its predecessors after the close of the registration year, and while it is to be regretted that the record then made could not be maintained, or even improved upon, as would have been the case had circumstances favored, it may safely be promised that with the issue of the next two Registration Reports all of the lost ground will be regained.

NECESSITY FOR AN IMPROVED REGISTRATION LAW.

It should be understood in this connection, however, that the larger and more costly part of the delay incidental to the publication of these Reports is not dependent upon any delay in this Department or in the

course of printing, but is inherent in the law under which the vital statistics of Michigan are collected. There is no immediate registration of births and deaths. Those that occur in the present month of January, 1897, will be recorded for the first time when the supervisors and assessors go about in April and May, 1898,—over a year subsequent to their occurrence. And the same deaths will not be reported to this Department, after being twice copied by the county clerks, until September 1, 1898, or over a year and a half from this time. There is no reason whatever for this delay. It prevents the statistics from being of any immediate practical use. It robs them of accuracy, probably two deaths out of every five that occur failing to be reported. And even in the case of the births and deaths that are recorded many errors appear, which, owing to the lapse of time, possible removal of families or death of relatives, it is practically impossible to correct.

Conclusive evidence of the inaccuracy of the State registration system is given in this Report by comparing the returns of births and deaths made by it with the returns secured by the State census of 1894, which is itself very nearly as inaccurate with respect to vital statistics. How two systems of registration, both nearly equally inaccurate, may serve as checks upon each other, is shown in Tables 20 and 65, for births and deaths, respectively. In the latter case (page 186), it appears that the registration exceeded the census in the number of deaths recorded for seven months of the census year, 1893-94, while the census exceeded the registration in the remaining five months. The advantage lies on the side of the system whose time of enumeration is nearer to the period registered, showing that lapse of time is responsible for the incomplete returns. Indeed, it is thoroughly accepted by statisticians that the method of enumeration or census method is an utter failure for the collection of vital statistics. This is shown even more clearly when the results of an enumeration of marriages made by the census comes into comparison with the accurate results of the State system of registration of marriages. According to the census, there were 14,498 marriages during the census year 1893-94 of persons who were residents of the State at the time of the census. Neglecting the small number of couples who removed from the State after marriage, which is counterbalanced by couples who entered the State after marriage elsewhere during the census year, we may compare this number with the number of marriages that actually occurred in the State, and which were returned to this Department under the marriage license law of 1887, namely, 18,644. There was thus an omission of no less than 4,146 marriages by the

census enumeration, corresponding to a required increase of 28.6 per cent of the census data to equal the truth. The returns of births and deaths would show as great discrepancies could they be compared with a reliable registration.

The imperfections of the census and registration (so-called; there is no true registration of vital statistics by the State system) is further shown by comparison of the results in each township and ward as given in Table 17, beginning on page 34. Here, of course, the comparison is necessarily a general one, because the census year and the registration year do not exactly correspond; but there were no very great variations in vital rates in the State from 1893 to 1894, so that when we observe a very marked discrepancy, it is pretty certain that one or the other set of returns is unusually deficient. How either set compares with the results of accurate registration, may be noted by examining the data shown on page 49 (Grand Rapids), and on page 65 (Detroit). Nearly as many deaths were actually registered in Grand Rapids by the city board of health as either the census or registration reported for the entire county of Kent; and about 1,000 more deaths were recorded by the Detroit board of health for the city of Detroit alone than were enumerated by either the census or registration for the entire county of Wayne, including Detroit.

With a reliable system of registration of vital statistics in the State, of which the municipal systems now in operation would form an essential part, there would be no necessity whatever for the census to attempt to collect vital statistics,—an attempt which has always resulted in practical failure, and must necessarily continue to do so. Instead of three distinct collections of vital statistics in the cities of the State, during census years, namely, (1) registration by assessors in April and May; (2) enumeration by census enumerators in June; and (3) continuous immediate registration by certificates of deaths as conducted by the city authorities, we should retain only one, the city system, which is the only one whose results are approximately accurate. This would effect a large saving of expense.

ACTION OF THE STATE MEDICAL SOCIETY.

The imperfections of the present registration law of Michigan have become thoroughly well known among physicians, sanitarians, health officers, and all interested in the improvement of the public health of the State. As a result of dissatisfaction with the present system, a com-

mittee of the State Medical Society was appointed to petition the Legislature with reference to an improved plan of registering births and deaths, and will present a bill, or rather two bills, for that purpose. It was happily suggested to embody the provisions relative to the registry of births and deaths in separate bills, for the principles which should be observed in framing an efficient law are somewhat different in the two cases. Moreover, the accurate registry of deaths is of so much greater immediate practical use to the sanitary authorities of the State, that we may be content for the present if only the mortality statistics of Michigan be brought into better condition. The State Medical Society was largely instrumental in securing the present registration law, under which no less than 400,800 marriages, 1,039,028 births and 438,582 deaths have been registered down to the end of the year 1894. It is perhaps needless to say that medical men as such have no personal interests to be subserved by the passage of a better vital statistics law; rather, certain additional duties are imposed upon the medical profession, without compensation, which only the interest of the profession as a whole in the maintenance of the public health causes them to offer to perform. As embodying in succinct form many of the objections to the present system, together with the principal features of that proposed for its amendment, the following extract from a circular letter issued by the committee of the State Medical Society is presented:

RECOMMENDATIONS OF THE MICHIGAN STATE MEDICAL SOCIETY.

It seemed preferable to propose two bills of similar form, one providing for the registration of deaths and the other for the registration of births. While it is very desirable that the births that occur in Michigan be accurately registered, more especially for legal purposes, the accurate registration of deaths is of such paramount sanitary importance that we have determined to direct our chief efforts during the coming session of the Legislature to the attainment of this end. We therefore ask, and confidently expect, your hearty assistance in obtaining a law that will give us an accurate and prompt registration of deaths throughout the entire State of Michigan.

THE PRESENT LAW IS VERY DEFECTIVE.

The necessity for an immediate revision of the law appears from an extract taken from the letter of Hon. Washington Gardner, Secretary of State, prefixed to a recent volume of the Annual Registration Report of Michigan:

"These statistics, except those of marriages, which are fully returned under the marriage license law of 1887, are collected and returned to this Department under the old registration law of 1867, as amended in 1869, which law has proved utterly inadequate for the purposes for which it was devised.

"The returns of both births and deaths are deficient to such a degree that they would require to be increased by at least sixty per cent to correctly represent the actual numbers of births and deaths that occurred. It results that proper legal records are not preserved of many births and deaths that occur in the State, and that the statistics based upon the registration returns have never been reliable. It is humiliating to confess, but strictly true, that after over twenty-five years of State registration under the present system in Michigan, we have no birth-rates or death-rates for the State, or for even a single county of the State, that are approximately correct, or that would command respect for a moment with those familiar with vital statistics. * * * * *

"It is urgently recommended that prompt legislative action be taken to remedy this unsatisfactory condition of affairs by the passage of a registration act more in accordance with modern requirements. State registration, if worth doing at all, and from its sanitary, social and legal applications it is unquestionably an important and necessary function of the State, is worth doing well. Money spent for imperfect and incorrect returns is largely wasted; money expended upon a reliable system of vital statistics will bear abundant interest in sanitary and social improvement."

THE PLAN PROPOSED.

The general design of the proposed registration law is very simple and may be outlined as follows:

1. Certificates of death signed by physicians with respect to the cause of death (at present such certificates are required only in certain cities under their local ordinances but not under the State law).
2. Burial or removal permits issued by the local registrar, who is the clerk (or health officer) of the township, village or city.
3. The registrar records each certificate in his register of deaths.
4. The registrar mails monthly the certificates of deaths to the Secretary of State at Lansing, who preserves, indexes, and compiles them, and publishes the information in his Annual Registration Report and in Monthly Bulletins of Mortality.*

NO RED-TAPE OR ADDED EXPENSE.

The plan is simpler than that at present in operation. It will secure accurate results—there is no question about this, for such a system, in all essential details, has been in operation in the State of New York since 1884. Besides, precisely similar systems of registration have been in operation in many of the cities of Michigan for years (*e. g.*, Detroit, Grand Rapids, Bay City, Lansing, Flint, etc., etc.), and have proved themselves entirely practicable. It will give prompt returns, so that reliable information in regard to unusually prevalent causes of death can be issued within 15 days after the close of each month.

One of the most prominent defects of the present system, and the chief cause of the inaccuracy of the returns, is the unnecessary delay that ensues from the occurrence of deaths to their registration. The average interval at present is about nine

*The registrar also sends a monthly transcript to his county clerk, thereby maintaining the present records at the county seat and enhancing their value.

months! It is nearly two years from the occurrence of deaths before the Registration Reports relating to them appear, and thus very much of the timely interest and immediate sanitary value of these statistics is lost.

The expense of each item registered will be less than under the present system. This economy is attained by utilizing the results of the city systems of registration now in operation.

DISPENSES WITH EXPENSIVE AND INACCURATE COPYING AND RE-COPYING OF THE RETURNS.

Under the present law, every entry of a death is written three times—once by the supervisor, and twice by the county clerk. Very annoying mistakes occur, especially with respect to causes of deaths, which quite invalidate the returns, owing to careless or ignorant copying. It is difficult or impossible in many cases to trace an error back and to correct it. Under the proposed law, only one transcript of the certificate will be required, and the original returns will be preserved and made the basis of compilation.

PHYSICIANS ONLY SHOULD CERTIFY TO CAUSES OF DEATHS.

Under the present law, the supervisor picks up his information in regard to the cause of death in any manner that seems fit—probably in most cases from the families or friends of decedents. As a result of ignorance of medical terminology, some very worthless and astonishing returns are made. Such, for example, as “fits,” “chronic,” “rash,” “sore inside,” “yaller ganders” (by which is meant jaundice!), etc., etc., are very common. In many instances the reported causes of deaths are entirely worthless for sanitary or statistical purposes. The remedy for this condition of affairs lies in the passage of the proposed bill, which provides that physicians shall certify to the causes of deaths, and in case of any misunderstanding or error under that head, correspondence will be had with them directly, not through unqualified unprofessional channels. This plan is now in vogue in Minnesota, Maine and other states, and works admirably, a great improvement resulting in the registration of causes of deaths.

HEALTH OFFICERS DEMAND BETTER VITAL STATISTICS.

At the Third Annual Conference of Michigan Health Officers, held at Ann Arbor, July 16-17, 1896, the following resolution was presented and unanimously adopted:

Whereas, Reliable statistics constitute so important a basis for the development of the sanitary service of the State, and since the methods of collecting these statistics in this State are such that gross errors may be made, we, members of the conference of health officers of the State of Michigan, petition the coming Legislature to pass a bill for the immediate registration of births and deaths.

V. C. VAUGHAN, M. D.,
S. P. DUFFIELD, M. D.,
O. L. DALES, M. D.,
J. F. HICKS, M. D.,
A. D. HAGADORN, M. D.,
S. S. FRENCH, M. D.,

Committee.

OTHER NEEDED LEGISLATION.

The marriage license law, enacted in 1887, is so successful in its practical working that any attempted improvements upon it should be made with great caution, lest the present excellent results obtained under the law should be impaired. From examination of Table 44 on page 134, it appears that there is considerable laxity in making returns of marriages in certain counties of the State. It would be, perhaps, desirable that marriage licenses should be good for use only for a limited time after issue, say sixty or ninety days, and that a renewal be necessary if they are to be used after the expiration of that time. At present when a license is not returned to the county clerk, it is impossible to know whether the marriage has been solemnized or not. The penalties for non-compliance with the law requiring returns of marriages to be made within ten days after solemnization by clergymen and justices of the peace should be rigidly enforced.

Divorces have never been registered in Michigan. They constitute a very important part of the vital statistics, and from indications furnished by statistics collected unofficially (see pages 167 to 179 of this Report), it would appear that they are increasing in number in this State relative to the increase of population. , Certainly, exact information is desirable upon this subject, not only for the purposes of the social inquirer, but in order that enlightened legislation may be enacted, if necessary, in reference to divorces. Such statistics can be obtained with very little trouble and expense from the county records, and compiled in these Reports.

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ERRATA.

In the fourth line of last paragraph on page 121, read "22.2" for "21.1." On page 130, third line from top, read "Table 18, page 68" for "Table 17, page 34." In Table 59, page 170, fifth column, for the year 1884, read "14,963" for "14,960;" for the years 1893 and 1894, read "17,589" and "16,828," for "17,592" and "16,826," respectively. On page 171, sixth line of third paragraph of text, read "Table 60" for "Table 59." The title "Malarial Fever" was omitted from Index; see same references as given for "Fever."

TWENTY-EIGHTH ANNUAL REGISTRATION REPORT OF MICHIGAN.

PART I.—VITAL STATISTICS AND POPULATION.

STATISTICS.

I.

So many men, on such a date of May
Despaired and took their hopeless lives away
In such an area, year after year:
In such another place, it would appear
The assassinations averaged so and so
Through August after August, scarce below
A given range; and in another one,
March after March, it seems there were undone
So many women, still about the same,
With little varying circumstance in their shame;
Burglaries, arsons, thefts and forgeries
Had their own averages as well as these;
And from these figures science can discern
The future in the past. We but return
Upon our steps, although they seem so free,
The thing that has been is that which shall be.

II.

Dark prophet, yes! But still somehow the round
Is spiral, and the race's feet have found
The path rise under them which they have trod.
Your facts are facts, yet somewhere there is God.

—WILLIAM DEAN HOWELLS.

Contemplation of great masses of human events—the essential method of vital statistics—undoubtedly inclines the observer to a more or less fatalistic train of thought. Reflection on the inevitable number of deaths from accident, from suicide, or from any defined form of disease, that is bound to occur in any community of given population, judging from the experience of year after year, suggests the idea of a dark and relentless power behind the apparently voluntary acts of man, under whose mysterious laws even the results of his mad passions and weariness of life may be marshaled in rigorous scientific order. Even the suicide, the mur-

derer, violates no law from this point of view—however grievous his transgression of divine and social ordinances—but may be regarded as an extreme, but necessary element under present conditions of evolution, of the great human problem, certain phases of which it is the province of vital statistics to study.

Some portion of the gloominess not unfrequently attendant upon the consideration of vital statistics, may be the consequence of transferring the conclusions derived from the study of many persons to the prediction of the probable history of the individual. So many died, at such an average age, and from certain causes; so the individual measures his probable after-lifetime, and the possibility of succumbing to certain dreaded diseases,—and the result, on the whole, is not generally conducive to cheerfulness. Yearly over ten per cent of all deaths reported in Michigan are from consumption, and it is therefore morally certain that about one in every ten of the readers of these words will die from this disease.* Let us not dwell upon the dark picture overlong, but rather turn with relief to the efforts made to diminish this enormous death-rate, and the possibility of improvement and cure in the individual case, although the result in the aggregate is fearfully certain.

VALUE OF ACCURATE VITAL STATISTICS.

Without attempting to make an exhaustive statement of the many ways in which accurate registration of births, deaths, marriages and divorces conduces to the public and individual welfare, a few suggestions may be given as to the chief uses of these statistics. It is too often the case that persons hastily examine statistical reports, without special object or interest, fail to find any features that especially commend themselves at the moment, and immediately pronounce adversely thereto. Let the same individuals, undertaking to investigate some social or sanitary question, refer for information to the despised reports, and it may be that the accessibility, accuracy and suggestive arrangement of the data desired will win their hearty commendation. Births, marriages and deaths are not in themselves of special interest to any person except only as personal acquaintance may give them that character, nor are the statistics derived from their study of interest to those who do not bring to their consideration some knowledge of the social problems for whose elucidation the data are presented.

Under the leading uses of vital statistics may be grouped the following list of services performed by an accurate system of registration. Regarding none of these can there be at the present time any reasonable controversy, for the results are such as are obtained by the practical operation of registration laws in the leading countries of Europe, the most advanced and populous states of this country, and in all of the Australasian colonies.

1. Registration affords an invaluable personal record of the principal events in the life of each individual for all legal and genealogical purposes. Pensions and inheritances not infrequently depend upon such records.

2. It affords a "first line of defense" against certain crimes, especially those perpetrated upon children at the defenseless ages and upon women, by the rigid requirement of death-certificates in all cases from physicians or coroners.

3. It gives information, or should do so, of the presence of dangerous communicable diseases in time to restrict them, in many cases.

*This statement is very moderate, since all ages are included, and the death-rates of children from pulmonary consumption are low. Out of the total number of adults between the ages of 20 and 45, who died in Michigan during the 23 years, 1872-94, no less than 30.0 per cent were returned from consumption.

4. It affords information as to the unsanitary condition of localities, thereby suggesting sanitary investigation and the removal of causes of sickness. It enables the conditions of the public health in different parts of the same state, or in different states and countries to be compared, and specifies the diseases most prevalent in different places. Vital statistics is the handmaid of sanitary science, and an indispensable aid to enlightened sanitary administration, whether of the township, city, state or nation.

5. Vital statistics presents important data as to the social condition of communities, such as the frequency and fecundity of marriage, the prevalence of divorce, variations in the rate of natural increase, etc., etc. It is surely of interest to the citizens of an American state to know how far the elements of perpetuity of the original American blood may be present or wanting, and conversely to what extent the alien may be expected to supplant the present occupiers of the soil.

6. Lastly, and not wholly apart from the preceding proposition, the importance of vital statistics as an element of the movement of population can scarcely be over-rated. Census enumerations present the population of a state or country at a definite time, but, unless taken at unusually frequent intervals, show nothing of the process of growth in itself. Given an accurate census and a correct registry of vital statistics, then, the effects of migration aside, there would be no further need of a census so far as knowledge of the population was concerned. Of course this ideal perfection has not yet been reached either in the matter of census taking or registration, but is the point toward which our efforts are approximating.

CONDITION OF VITAL REGISTRATION IN MICHIGAN.

Not nearly all of the valuable results to be obtained, and which have been obtained in practice, from a reliable system of registration are enjoyed by the inhabitants of this state as a result of the so-called registration system that has been in operation in Michigan for nearly thirty years. Despite the name, we have never had an actual *registration* of births and deaths in this state, but instead merely an annual census enumeration by supervisors at the time of making their annual assessments. Such enumeration is by no means as accurate as registration, either with respect to the whole number of vital events registered, or with regard to the accuracy of the particulars obtained in any case. Probably not more than two-thirds of the actual numbers of births and deaths that occur annually are properly placed on record. And the returns are made so tardily under the law, that all immediate utility is sacrificed. They are not received at the State Department until nine months after the close of the year for which they are collected.

Marriages are accurately registered, a license being required with all statistical particulars previous to solemnization, and the statistics collected since the passage of the license law of 1887 are probably nearly as perfect as those of any state or country. They might be absolutely so, except for the occasional negligence of county clerks to fully comply with the law, and to enforce compliance on the part of clergymen and justices of the peace, who are required, under heavy penalty, to return all marriages performed by them within a period of ten days. As it is, judging from the reports of licenses issued and returns not received thereon after nearly a year's interval, the deficiency cannot be much in excess of one per cent of the total number.

No provision has ever been made for the registry and compilation of divorces in this state. This is a very serious omission in our statistical system, for there is no single class of statistics of so much general interest and public importance, in

proportion to their numbers, as the statistics of divorce. In this report (Part III) data are given, collected by private persons for Michigan, which at least go to show that the state should undertake the official collection and compilation of the facts pertaining to this subject. It may be further urged that the statistics of marriages and births at present collected are imperfect in that they want the large element of correction to be supplied by divorce statistics.

It follows from the above statements that the data presented, and the statements made in the text relative thereto, so far as they relate to the subject of marriages, may be taken at substantially their face value, and may be compared directly with the corresponding statistics of any state or country having effective registration; but the statistics of births and deaths cannot be so compared, without making allowance for a large deficiency—how large, cannot be exactly known—on account of incomplete returns. The death-rates and birth-rates require to be increased by about 60 per cent for the state as a whole. For individual counties, nothing whatever can be said with certainty as to the probable amount of correction, since the returns vary greatly in accuracy in different parts of the state, and in the same county from year to year.

It has been thought best to thus frankly state the imperfection of the Michigan system of registering births and deaths at the outset of this report, and to warn against the careless use of the statistics presented. It is by no means implied that no data concerning births and deaths are reliable, nor may be fully depended upon. For certain objects, a partial registration of births and deaths probably serves as well as an absolutely complete registration. The average age of decedents, the proportions of decedents and of parents of each nationality or general nativity, the relative numbers of persons of each sex born and dying, and, in general, all relations depending upon comparison of data of any class with the total of all births or deaths—these may probably be as correctly known from the study of the present returns as they would be if the returns were more complete. It is chiefly in the matter of absolute vital rates that caution must be exercised. In the text relating to the various tables it has been one of the compiler's chief duties to indicate, as fully as possible, to what extent the data presented might be relied upon, and to point out in what respects serious errors might be incurred by its use. The expert in vital statistics will have no difficulty in deciding at a glance as to the probable validity of a table, knowing the manner of collection of data and the inaccuracies connected therewith, when the casual reader would be disposed to implicitly rely upon the statements thus "officially" made, and to be greatly misled thereby. So much opprobrium has been brought upon the science of statistics by the careless use of data—"anything can be proven by statistics"—that it is incumbent upon all concerned with the presentation of such matters to use great pains that no pitfalls be left for the inexperienced.

REGISTRATION AND THE CENSUS.

The decennial state census of Michigan was taken in June, 1894, under date of June 1, which corresponds nearly to the middle of the registration year. The results of registration as presented in this report may, therefore, be directly compared with the population given by the census, and thus vital rates of an unusually authentic character be obtained. As censuses are not usually taken yearly, it is a necessary evil in the preparation of registration reports that some mode of estimating populations for intercensus years be adopted, but the rates based upon such estimated populations can never be received with quite the full assurance that the direct comparison of registration and census affords. This is especially true for

the subdivisions of the state, whose rate of annual increase is subject to greater variations than that of the state as a whole, and whose vital rates several years from the last census must become very uncertain, whatever plan of estimation be adopted. In the tables in this part of the report showing birth-rates, marriage-rates and death-rates for preceding years of registration, opportunity has been taken to revise the rates for recent years in the light of the last census.

Besides affording a basis of population for the establishment of vital rates, the census presents other matters of interest for comparison with the state registration system. Births, marriages and deaths are collected by the census enumerators in much the same way as they are collected by the supervisors. That is, in May, 1895, the supervisors and assessors of Michigan collected and returned to the county clerks all (presumably) of the births and deaths that had occurred in their respective townships or wards during the preceding calendar year ended December 31, 1894. The census enumerators did precisely the same thing in June, 1894, (and also collected marriages), for the census year ended June 1, 1894. It will be seen that the two periods for which vital data were collected overlapped each other for the first five months of 1894, and that, no unusual features characterizing the vital history of the state for the early part of 1894 or the latter part of 1893, the results obtained should be in substantial accordance. A table has therefore been constructed (Table 17, Part I) comparing the two sets of returns of births and deaths as received from every township and ward in the state, and enabling the relative accuracy of the enumerations to be judged of.

The total number of births in Michigan in 1894 according to the registration returns was 44,596. The number enumerated for the census year 1893-94 was 59,889, an excess of 15,293 or 34.3 per cent. This large excess is less than the estimated deficiency of the registration returns, which, as stated in the two previous reports, are believed to be subject to a correction of at least 60 per cent of the number returned, making the estimated true number of births in 1894 about 71,354, or about 20 per cent more than the census enumerated. This conclusion, that the census enumeration of births, while somewhat more perfect than the registration by the supervisors, yet requires to be increased by at least 20 per cent to represent the true number of births that occurred, is in close accordance with the results reached by Dr. Billings in studying the United States census enumeration of births in 1890. The birth-rate of the state with the maximum estimate of 71,354 births in 1894, would be only 31.8 per 1,000 population, that of the United States as a whole, in 1890, being about 31.4.

In like manner the census gives a total of 23,796 deaths for the census year 1893-94, or 13.5 per cent more than the registration return of 20,959. But the registration returns were probably deficient to such a degree that about 60 per cent of their number would require to be added to represent the true number that occurred. This number is 33,534, or 40.9 per cent more than the census showed, and represents a death-rate for the state of 15.0 per 1,000 population, a rate well within the range of probability.

On the other hand only 14,468 marriages were recorded by the census for the year 1893-94, while for the registration year 1894 18,220 were recorded. This represents a deficiency of 25.9 per cent on the part of the census. The marriages registered under the present license system are substantially correct, so that the above percentage of deficiency on the part of the census in this respect may serve to indicate how imperfect the census enumerations of births and deaths really are. The conclusions drawn from such comparison agree fairly well with those derived from other sources.

Similar relations between the census and registration returns existed for previous years, notably in 1884. Comparison may be made by means of the following table, showing the percentage of excess (or deficiency in some cases, especially in relation to marriages) of the census over the registration returns for each year in which the data were presented. Unfortunately, comparison of the registration returns for 1890 with the United States census of that year is quite impossible, as the former are quite vitiated by unlawful sophistication of the returns from Detroit.* The vital data collected by the state census of 1874 seem to have been very imperfect, none at all being given for births; for other years the relations of the births registered, except in 1890 as noted above, are quite constant. The introduction of the marriage license law in 1887 appears to have increased the percentage of deficiency of the census returns of marriages.

Comparison of births, marriages and deaths in Michigan as returned by state and national censuses and by the state system of registration.

Years ending in—	Marriages.			Births.			Deaths.		
	Census.	Registration.	Excess of census (per cent.).	Census.	Registration.	Excess of census (per cent.).	Census.	Registration.	Excess of census (per cent.).
1870.....	10,259	9,791	4.9	34,530	26,663	29.5	11,181	10,766	3.8
1873.....	8,608	11,897	-27.6	34,608	-----	-----	14,280	14,258	.1
1880.....	-----	14,935	-----	45,843	35,323	29.8	19,743	16,102	22.6
1884.....	14,159	15,989	-11.4	53,775	40,408	33.1	19,979	18,056	10.7
1890.....	-----	18,664	-----	51,931	? 52,306	? -7	25,016	21,642	15.6
1894.....	14,468	18,220	-20.6	59,889	44,596	34.3	23,796	20,959	13.5

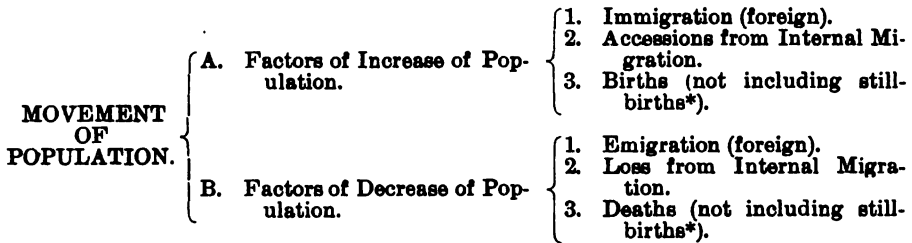
NOTE.—The registration years are calendar years ending on December 31. The census years end on June 1, preceding, as a rule, but in the case of the State census of 1874 the enumeration was made at about the same time as the registration and covered the marriages and deaths (births were not enumerated) for the calendar year 1873. In stating the excess (per cent) of the census enumeration over the registration, it is found in some cases that the registration returned the greater number of events. These are indicated by the minus sign (—), and should be read as the *deficiency of the census*. The registration returns of 1890 and the ratios based upon them are marked by a "?" since the returns of births from Detroit were in part fraudulently increased, thereby apparently indicating a more perfect registration than actually obtained.

THE MOVEMENT OF THE POPULATION.

Among the particulars cited in which an accurate system of vital statistics would prove beneficial was mentioned the light that would be thrown upon the movement of the population. The matter is of so much importance, and may be regarded with so much propriety as one of the most essential objects of vital statistics, that it is permissible to enter somewhat more fully into the subject.

The movement of the population may be defined as the net result or algebraical sum of all those factors tending to change the number of the inhabitants. Population as existent at any given time is studied by means of the census; its movement can only be known by (a) comparison of successive censuses, or (b) by knowledge of the natural increase of population, together with (c) the net effects of migration, internal and external. We may contrast the factors tending to cause loss or gain in the number of inhabitants of the state as follows:

* See foot-note on page 18.



Indirectly, the frequency of marriage may also be regarded as one of the factors contributing to the increase of population, both as adding to the number of child-bearing couples, and as diminishing the high death-rate of illegitimate children. Per contra divorce has an unfavorable bearing upon the rate of natural increase.

As indicating the relative importance of these several elements of population, we may state the constitution of the population of Michigan according to the United States census of 1890 (the full results of the state census of 1894 are not yet available):

Population of Michigan, June 1, 1890.....	2,093,889
Born in Michigan and living in Michigan.....	1,123,978
Born in other states, living in Michigan	423,031
Foreign-born inhabitants	543,880

Comparing the corresponding data of the United States census of 1880 for these classes, we have:

	<i>Ten years, 1881-90.</i>	
	<i>Gain.</i>	<i>Loss.</i>
Total population of Michigan	456,952	
Born in Michigan, living in Michigan.....	320,672	
Born in other states, living in Michigan		19,092
Foreign-born.....	155,372	

It thus appears that for the decade 1881-90, the natural increase of population was the most important factor, amounting to somewhat more than double the net accessions of foreign birth. A small balance is shown against the state in accessions from other states.

The increase in the population of foreign birth at the end of a census decade represents the accessions during the decade, less the deaths and the comparatively few lost by return to the country of birth. In like manner the increase of the native-born (natives of Michigan) represents the natural increase of the total population, less the losses to other states, and the presumably very small emigration to foreign countries. Although the effects of internal migration cannot be definitely stated for the decade—it is probable that the net effect was a considerable loss to the population of Michigan, mostly in favor of the developing states of the Great West—the

* Still-births may be defined as births that do not increase the population, and deaths that do not diminish it. Having no bearing upon the movement of population, they should be uniformly excluded from such discussions, although from one point of view, viz.: as more or less preventible causes of death, to a certain extent, they may enter into the problem.

VITAL STATISTICS OF MICHIGAN, 1894.

aggregate effects of such migration from the beginning, as shown by the census of 1890, may be given, and represent a total gain of 228,518 persons.

The net result of internal migration (movement of persons born in Michigan to other states and the reverse) according to the United States census of 1890.

States.	Born in Michigan but living in other states, 1890.	Born in other states but living in Michigan, 1890.
Total.....	197,512	426,031
Maine.....		4,332
New Hampshire.....		2,514
Vermont.....		9,452
Massachusetts.....		8,141
Connecticut.....		4,532
New York.....	10,557	193,111
New Jersey.....		6,391
Pennsylvania.....		32,947
Ohio.....	17,216	80,147
Indiana.....	11,844	22,015
Illinois.....	21,321	11,343
Wisconsin.....	11,618	17,547
Minnesota.....	11,782	
Iowa.....	10,315	
Missouri.....	7,805	
North Dakota.....	3,973	261
South Dakota.....	7,078	228
Nebraska.....	13,886	
Kansas.....	13,775	
Colorado.....	6,844	
Washington.....	8,737	
Oregon.....	4,067	
California.....	10,209	
Other states.....	26,485	33,070
Balance of internal migration in favor of Michigan		228,518

In conclusion, certain remarks of philosophic interest relating to this subject, the movement of population, by Mr. J. A. Baines, F. S. S., of the Indian Civil Service,* may well be given place. Wherever studied, the principles of demography are the same, and oftentimes an explanation of puzzling phenomena in the vital history of a state or country may be afforded by the study of the vital statistics of another land, where life exists under very dissimilar conditions. Precluded from

* General Report on the Census of India, 1891.

direct experiment in this branch of science, judicious comparative observation of the vital statistics of different countries may afford as satisfactory, and nearly as direct evidence for the establishment of laws as laboratory methods present in chemistry.

"In this, its dynamical aspect, a population is the resultant of certain opposing forces, whose combined action tends ultimately to equilibrium. In the present stage, however, of the world's development, there is an almost rhythmic variation in the intensity of each, effecting continuous change, the bias of which is just now in favor of the positive, as distinguished from the preventive, elements. There are various ways of grouping these elements, and, on broad lines, we may adopt the two classes of the physical, or domestic, and the political, or foreign. Under the former head come the natural forces of birth and death; in the latter we place war and migration. Underneath these general combinations, again, may be distinguished influences that are practically constant from those which are accidental or temporary. The reproductive instinct, for example, is constant, but its results are stimulated or repressed by artificial considerations, such as, amongst others, the prevailing views on marriage or inheritance. It may even be qualified, some hold, by a modification of type in a community which has reached a certain stage of development, in which case the restriction borders on the permanent. Death, again, is a debt due by all, though most of us are like Falstaff, loth to pay it before its time; but is liable to receive the fortuitous assistance of war, pestilence and famine. The change, too, resulting from migration may be accidental, or else part of the ordinary process of internal expansion.

"The conclusions arrived at by Malthus on this important subject have been severely criticised, and often misquoted and misapprehended, but, in the main, they have not been disproved. In certain particulars, no doubt, his deductions were too sweeping, and in others, modern science, in the progress of physiological investigation and in the experience drawn from a wider field of observation, has had to introduce qualifications derived from sources of which Malthus was ignorant. For instance, in estimating the means of subsistence, he seems to have depreciated the results of an increased and improved application of human industry to the production of food from natural sources, and to have laid too little stress on the power of dispersion in sustaining any particular population. His view, too, that the power of multiplication was only restrained by what he termed the preventive checks, appears to be controverted by what we know has happened since he wrote. For, allowing that the proportion of married women of the reproductive age is the main factor in the natural increase of the population, we find that instead of the maximum number of children that could be produced during the 20 years included, as a rule, in this period, the average, even under highly favorable conditions, physical and moral, is about four per marriage, and only six at the maximum. We see, also, that in countries where every circumstance is in favor of multiplication, unrestricted by either postponement of marriage or abstinence from it, by war, starvation or disease, and stimulated, perhaps, by the immigration of adults of both sexes, [as in Michigan] the rate of increase is considerably below that which might, *ex hypothesi*, be possible. There is every reason to suppose, accordingly, that Malthus' view ignores some important physiological sequence that has not even yet been ascertained. We have, however, the suggestion, to call it by the least assumptive title, of Mr. Herbert Spencer, that pressure of population consequent on excessive fecundity, tends to provide, in some degree, its own corrective. For this pressure implies an increased demand upon the intellectual and nervous qualities of life to meet it, and the stock of nutriment being the same, these latter can only be satis-

fied at the expense of the reproductive faculties. The more the former are brought into play, the less there is left for the sustenance of the others. Life may be, and probably is, lengthened, but the community is neither so numerous or so physically well equipped as the well fed savage. If this doctrine be correct, and it has much to recommend it, one of its consequences may fitly be mentioned here. It is, that according to the theory, every community has to pass through a stage of what we may call probation. Between races and even the larger political entities, such as nations, a higher type of civilization in the one and of character in the other, is pretty sure to prevail, and this is apparently what Bacon implied in the latter portion of the phrase quoted at the head of this chapter,* and what one of our greatest modern statist, Dr. Farr, meant when he said that the 'character of every race of men, allowing for accidents of position and time, is the real limit to its numbers in the world.' But in the case of smaller aggregates than the above, where, that is, competition lies within narrowed limits and is actuated by mere individual impulse, intelligence and what are called the social virtues, must be, for a time, and a considerable one, at a discount. For, by the hypothesis, they result in diminished fecundity, so that until they have permeated widely through the community, the class which exercises them must inevitably fade into numerical insignificance relatively to the reckless prolificity of those who have nothing to lose by the indulgence of their strongest instinct. This is an aspect of the population question which it has luckily not been necessary to take into consideration hitherto in connection with India, but the peculiar social organization of the great mass of the people of that country renders it impossible for enlightenment to progress at anything like the rate of its numerical growth. The period of probation, therefore, during which these multitudes will have to be passing through the discipline of hardship before they are mentally adapted to their new circumstances, must be a peculiarly long and trying one. [In marked contradistinction from the conditions attending such evolution in this country.] Luckily it seems to be still far off, and the approach to it is by means of steps almost imperceptible. For before pressure of the character above described can be felt by a community, it is necessary that dispersion should have reached its limit. By dispersion is not here meant solely the migrations of a single community, but the corresponding movements of all communities to tracts which allow of their providing food to supply the wants of others, over and above the stock raised for their own maintenance. It is the facility of this transfer of the results of labor, together with the greater industry and intelligence brought to bear on the soil where the arable area is fully occupied, that makes it possible to say that in the present day the food supply has increased not only in line with, but even in advance of, the growth of the population, and, other things being equal, this will continue to be the case, so long as there is land found on the globe fit for remunerative tillage."

SUMMARY OF REGISTRATION RETURNS FOR THE YEAR 1894.

The following are the general results of registration for 1894. For further particulars see the summaries at the beginning of each part of this report, and also the general list of tables and alphabetical index.

* "The true greatness of a State consisteth essentially in population and breed of men."

PRESERVATION OF VITAL RECORDS.

11

Total number of marriages,	18,220
Persons married,	36,440
Persons married per 1,000 estimated population,	16.3
Total number of births,	44,596
Births per 1,000 estimated population,	19.9
Total number of deaths,	20,959
Deaths per 1,000 estimated population,	9.3
Natural increase of population,	23,637
Natural increase per 1,000 estimated population,	10.5

PRESERVATION AND IMPORTANCE OF VITAL RECORDS.

From the beginning of registration, April 5, 1867, to the close of the year covered by this report, 1894, there have been registered the following total numbers of returns of each class:

Total number of marriages registered,	400,800
Total number of births registered,	1,039,028
Total number of deaths registered,	438,582
Aggregate number of births, marriages and deaths,	1,878,410

Each marriage record contains the particulars concerning two individuals. Doubling the number of marriages above given, and adding the aggregate records of births and deaths, we have a grand total of 2,279,210 individual records now on file in the office of the Secretary of State, or rather more than one record for each inhabitant at the last census. These records are strongly bound, are preserved in a fire-proof vault, and are accessible for examination by interested parties, under proper restrictions, for the verification of any birth, marriage or death that has occurred in the state since April 5, 1867. Searches are facilitated by means of alphabetical indexes of each year made in accordance with the provisions of the law, and are generally made by experienced clerks in the Department, a nominal fee being charged for a certified statement, when required, and for the actual time of the clerk employed in the private search.

Prior to 1895 these records were stored in the upper portion of a vault whose lower portion was in constant daily use, and in which one or more jets of gas was constantly burning during office hours. The superheated atmosphere of the upper part of the vault (there was practically no ventilation) greatly facilitated the action of the sulphurous gases upon the leather bindings of the records, corroding them and rendering them completely rotten after a very few years. In time, no doubt, the records themselves, or such of them as the bleaching action of SO_2 or the corrosive action of H_2SO_4 could affect, would have been quite ruined. They are now stored in a lower vault which is seldom lighted except for their examination, and in which they will deteriorate very much more slowly. It would be very desirable, however, that electricity should be the only means of lighting the record vaults, since in this way all risk of injury would be entirely removed.

At some future time, a printed transcript of these personal records will probably be made, in the same way that the vital records of Rhode Island have been published by the Genealogical Society of that state. Their value will increase with time, and with the occasional loss of county records, it will come to pass that many

of these transcripts, once lost or injured, cannot be duplicated. They will be the only sources for tracing descent, for the establishment of inheritances, and for the proof of important legal points; and their usefulness will not be confined merely to the inhabitants of this state, but they will be cited and recognized as authority wherever the descendants of the present inhabitants of Michigan shall dwell. As shown on a previous page, there were in 1890 nearly 200,000 natives of Michigan living in other states of the Union, each of whom, if born since 1867, has a right to look back to his native state for the official record of his birth, and in many cases for the record of marriage. It is true of Michigan as of New England that "there is hardly a remote corner of any of the states and territories of the West where representatives of our New England families are not to be found. They naturally feel a peculiar pride in the place of their birth, and the children of these exiles should be encouraged to keep constantly in mind the home of their fathers. The publication of these records, therefore, interests a much larger number of people than are to be found within the limits of any single town, and these printed volumes reach more readers than we can easily imagine."*

The following list shows the arrangement and character of the tables presented in this part of the report:

Synopsis of tables showing the general results of registration of vital statistics in Michigan and their relation to population.

Table.	Vital statistics and population.
1.	Marriages, births, deaths and natural increase of population in Michigan in 1894. <i>Population.</i>
2.	Growth of the State as shown by a comparison of the populations stated by the successive U. S. and State censuses from 1810 to 1894.
3.	Population, by sex, and by nativity, for the years 1870-94.
4.	Population, by sex, for certain important periods of age, 1870-94.
5.	Population, by nativity, for certain important periods of age, 1870-94.
6.	Population at certain important periods of age according to the censuses of 1870, 1874, 1890 1894, and 1894.
7.	Foreign-born population, by nationality, at the censuses of 1890, 1890, and 1894. <i>Vital rates.</i>
8.	Relation of registration returns to population, giving the number of persons married, births, deaths and natural increase of population per 1,000 inhabitants for each year of the period 1868-94 (still-births included in births and deaths).
9.	Births and deaths, birth-rates and death-rates, for the years 1867-94, with exclusion of still-births.
10.	Comparative table, showing the results of the National and State census enumerations of births and deaths in Michigan from 1870 to 1894.
11.	Marriages, births and deaths in Michigan during the year 1894, arranged with reference to sex, color and nativity for comparison with the corresponding classes of the population according to the census of 1894. <i>Comparative international vital statistics.</i>
12.	Marriage-rates in certain countries and states, 1880-94.
13.	Birth-rates in certain countries and states, 1880-94.
14.	Death-rates in certain countries and states, 1880-94.

* First Massachusetts Report on the Public Records, Hon. Carroll D. Wright, Commissioner; Boston, 1889; p. xlvii.

Synopsis of tables.—CONCLUDED.

Table.	Vital statistics and population.
<i>Registration by counties.</i>	
15.	Number of marriages, births, deaths and natural increase of population for each county of the State in the year 1894, with rates per 1,000 estimated population.
16.	Comparison of the returns of marriages, births and deaths from each county in the State for the year 1894, with the corresponding returns for 1893, showing the increase or decrease in each county of each class of returns.
<i>Registration and census compared.</i>	
17.	Comparison of the returns of births and deaths by the State registration system for the year 1894, with the returns of births and deaths according to the State census of 1894, by townships.
18.	Statement of the native-born and foreign-born population, by sex, and of the foreign-born population by separate nationalities, for each county in the State, according to the census of 1894.

VITAL STATISTICS RETURNED FOR 1894.

Table 1 gives a statement of the number of marriages, births, deaths and excess of births over deaths recorded for the year 1894. In order to make these numbers more easily comprehended, calculations are given of the average number of each returned for certain subdivisions of the year. Thus, 50 marriages occurred, on the average, on each day of the year 1894, in various parts of the State. There were 122 children born and 57 deaths in the same time. The net daily increase of the population of the State, aside from the number added by immigration, was 65 persons.

Table 1.—Number of marriages, births, deaths and excess of births over deaths in Michigan during the year 1894, with the average number for certain subdivisions of the year.

Period of time, 1894.	Marriages, 1894.	Births, 1894.	Deaths, 1894.	Excess of births over deaths, 1894.
Total for year.....	18,220	44,596	20,959	23,637
Average number per quarter.....	4,555	11,149	5,240	5,909
Average number per month.....	1,518	3,716	1,747	1,970
Average number per week.....	350	858	403	455
Average number per day.....	50	122	57	65

GROWTH OF THE STATE AS SHOWN BY SUCCESSIVE CENSUSES.

In Table 2 the population of Michigan is given according to each United States and State census since 1810, and the amount and percentage of increase of inhabitants by each enumeration over the population of the preceding census are also given. The last State census, that of 1894, shows the smallest per cent of increase over the preceding census (either the United States census of 1890 or the State census of 1884), of any census in the history of the State, the imperfect war-time census of 1864 not excepted. Of course, in this comparison percentages of increase for either four or ten year periods are compared with those for the same length of time.

Table 2.—Populations of Michigan by the decennial National censuses from 1810 to 1890 and by the decennial State censuses from 1854 to 1894; showing the amount and per cent of increase of population between National censuses, State censuses, and National and State censuses.

National and State censuses.	Popu- lation.	Increase of popu- lation during each decade by Nation- al censuses.		Increase of popu- lation during each decade by State censuses.		Increase of popu- lation during four and six year periods by Nation- al and State censuses.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
National census of 1810	4,762	-----	-----	-----	-----	-----	-----
National census of 1820	8,765	4,003	84.06	-----	-----	-----	-----
National census of 1830	31,639	22,874	260.97	-----	-----	-----	-----
National census of 1840	212,267	180,628	570.90	-----	-----	-----	-----
National census of 1850	397,654	185,387	87.34	-----	-----	-----	-----
State census of 1854	509,374	-----	-----	-----	-----	111,720	28.09
National census of 1860	749,113	351,459	88.38	-----	-----	239,739	47.07
State census of 1864	803,745	-----	-----	294,371	57.79	54,632	7.29
National census of 1870	1,184,059	434,946	58.06	-----	-----	380,314	47.32
State census of 1874	1,334,031	-----	-----	530,236	65.98	149,972	12.67
National census of 1880	1,636,937	452,878	38.25	-----	-----	302,906	22.71
State census of 1884	1,853,658	-----	-----	519,627	38.95	216,721	13.24
National census of 1890	2,098,889	456,952	27.92	-----	-----	240,231	12.96
State census of 1894	2,241,641	-----	-----	387,983	20.93	147,752	7.06

The census of 1894 was taken under unusual conditions. Several causes had operated to check the growth of population, as shown during the immediately preceding years, chief among which were the distress in the iron-mining regions of the upper peninsula and the general decline in immigration into the United States. These causes began to operate acutely during 1893, as shown by the great increase in the number of persons requiring relief in this year, by the marked diminution in the number of persons entering this country from Europe, and by the setting in of a strong current of returning migration from the United States to European countries. Added to these factors should also be considered the influence of the internal migration, which is so large an element in the growth of American communities, and through which the State suffered loss of population in two ways: (1) by the movement of inhabitants to other states where the opportunities for obtaining subsistence seemed, for the time at least, more favorable; and (2) by a decline in the normal amount of accessions that Michigan should receive from other states.

These disturbances in the conditions attending the increase of population in this State are, apparently, mainly of a temporary character. The lower peninsula contributed largely to relieve the necessities of the suffering miners in the upper peninsula during the winter of 1893-94, and such aid probably prevented the removal of many citizens who would otherwise have been compelled to leave the State. The reopening of the mines, and the promise of more favorable business conditions for the country at large, would seem to indicate that the lowest point of the period of depression has been reached, and if this be true, the population of the State may be expected to increase at its former rate. It is true, however, that the stricter immigration laws now in force may continue to limit the amount of immigration to an

amount much less than in former years, in which diminution Michigan will share proportionately.

POPULATION OF MICHIGAN BY SEX, NATIVITY AND PERIODS OF AGE,
1870-94.

Tables 3 to 6, inclusive, present data relative to the distribution of the inhabitants of Michigan as determined by the successive censuses from 1870 to 1894, with distinction of sex, general nativity, and periods of age. The proportional numbers for intercensus years are interpolated in arithmetical progression, thus affording a basis for many important computations of rates in the succeeding parts of this report. It was shown in the last report that such method of calculating populations for intercensus years—the arithmetical method—is more correct for the peculiar conditions of growth of this State, so largely dependent in the past upon immigration, than the usual geometrical formula.

Table 3.—*Population of Michigan, by sex, and by nativity, for the years 1870-94, inclusive.**

Years.	Persons.	By sex.		By nativity.	
		Males	Females.	Native.	Foreign.
1870	1,184,059	617,745	566,314	916,049	268,010
1871	1,221,552	637,603	583,947	919,287	280,060
1872	1,259,045	657,465	601,581	982,525	292,110
1873	1,296,538	677,324	619,214	1,015,763	304,159
1874	1,334,081	697,184	636,847	1,049,001	316,209
1875	1,384,515	724,713	659,803	1,082,239	323,259
1876	1,435,000	752,241	682,759	1,115,477	340,309
1877	1,485,484	779,770	705,715	1,148,715	352,859
1878	1,535,968	807,298	728,670	1,181,953	364,408
1879	1,586,453	834,827	751,626	1,215,191	376,458
1880	1,636,987	862,855	774,582	1,248,429	388,508
1881	1,691,117	890,399	800,718	1,277,897	413,720
1882	1,745,298	918,444	826,854	1,306,365	438,933
1883	1,799,478	946,488	852,990	1,335,333	464,145
1884	1,853,658	974,532	879,126	1,364,301	489,357
1885	1,893,697	994,073	899,623	1,395,252	498,444
1886	1,933,735	1,013,615	920,120	1,426,204	507,531
1887	1,973,774	1,033,156	940,618	1,457,155	516,619
1888	2,013,812	1,052,697	961,115	1,488,106	525,706
1889	2,053,851	1,072,239	981,612	1,519,058	534,793
1890	2,093,889	1,091,780	1,002,109	1,550,009	543,880
1891	2,130,827	1,108,970	1,021,857	1,580,203	550,624
1892	2,167,765	1,126,160	1,041,605	1,610,398	557,368
1893	2,204,703	1,143,350	1,061,353	1,640,592	564,111
1894	2,241,641	1,160,540	1,081,101	1,670,786	570,855

* Census years in full-face type. No statement of nativity was given by the State census of 1874. The State census of 1884 includes 206 persons of unknown sex, and 9,051 persons of unknown nativity, distributed *pro rata*. The figures for intercensus years are interpolated in arithmetical ratio.

VITAL STATISTICS OF MICHIGAN, 1894.

Table 4.—Population of Michigan, by sex, at certain important periods of age for the years 1870-94, inclusive.

Years.	Sex.	Periods of age.							Un- known age.
		Under 1 year.	Under 5 years.	Under 15 years.	15 to 29.	30 to 44.	45 to 64.	Over 65 years.	
1870	{ Males	16,639	83,444	228,986	173,227	115,858	81,633	18,034	7
	{ Females	15,990	80,758	221,805	162,999	103,268	63,758	14,479	5
1871	{ Males	17,180	85,676	235,514	181,004	120,962	85,362	19,358	6
	{ Females	16,464	82,939	228,059	168,876	107,408	67,168	15,630	5
1872	{ Males	17,682	87,908	242,042	188,782	126,066	89,091	20,681	6
	{ Females	16,939	85,121	234,313	174,784	111,538	70,578	16,780	4
1873	{ Males	18,208	90,140	248,570	198,559	131,169	92,820	22,005	5
	{ Females	17,413	87,302	240,567	180,631	115,674	78,968	17,981	4
1874	{ Males	18,724	92,372	255,098	204,337	136,273	96,549	23,328	4
	{ Females	17,887	89,488	246,821	186,509	119,309	77,398	19,082	3
1875	{ Males	19,246	94,582	261,626	212,114	141,377	100,278	24,652	4
	{ Females	18,362	91,606	253,075	192,386	123,944	80,809	20,238	3
1876	{ Males	19,767	96,792	268,153	219,891	146,481	104,007	25,976	3
	{ Females	18,886	93,728	259,328	198,263	128,079	84,219	21,388	2
1877	{ Males	20,288	99,001	274,681	227,669	151,585	107,736	27,299	2
	{ Females	19,310	96,851	265,582	204,141	132,214	87,629	22,584	2
1878	{ Males	20,809	101,211	281,209	236,446	156,688	111,465	28,623	1
	{ Females	19,784	97,974	271,836	210,018	136,350	91,039	23,685	1
1879	{ Males	21,331	108,421	287,737	243,224	161,792	115,194	29,946	1
	{ Females	20,259	100,096	278,080	215,886	140,485	94,449	24,835	1
1880	{ Males	21,852	105,631	294,265	251,001	166,896	118,923	31,270	-----
	{ Females	20,738	102,219	284,344	221,773	144,620	97,859	25,986	-----
1881	{ Males	22,723	107,986	301,908	258,813	173,587	123,021	32,766	277
	{ Females	21,609	104,443	292,004	229,877	149,523	101,927	27,276	88
1882	{ Males	23,595	110,242	309,551	266,628	180,279	127,120	34,263	553
	{ Females	22,435	106,668	299,663	237,980	154,426	105,996	28,566	175
1883	{ Males	24,466	112,547	317,193	274,438	186,970	131,218	35,759	830
	{ Females	23,360	108,892	307,323	246,084	159,329	110,064	29,855	263
1884	{ Males	25,337	114,852	324,886	282,250	193,661	135,816	37,255	1,106
	{ Females	24,236	111,116	314,982	254,187	164,232	114,182	31,145	850
1885	{ Males	25,312	115,849	329,373	285,471	198,574	139,747	39,384	1,436
	{ Females	24,158	112,022	319,656	259,338	168,517	118,522	32,992	516
1886	{ Males	25,287	116,846	333,909	288,692	203,486	144,177	41,514	1,768
	{ Females	24,080	112,929	324,330	264,489	172,302	122,913	34,889	681
1887	{ Males	25,262	117,843	338,446	291,912	208,399	148,608	43,643	2,095
	{ Females	24,001	113,835	329,004	269,640	177,068	127,306	36,685	877
1888	{ Males	25,237	118,841	342,982	295,133	213,311	153,039	45,772	2,424
	{ Females	23,923	114,741	333,678	274,791	181,373	131,695	38,532	1,013
1889	{ Males	25,212	119,888	347,519	298,354	213,224	157,469	47,902	2,754
	{ Females	23,845	115,647	338,352	279,942	185,658	136,086	40,379	1,178
1890	{ Males	25,187	120,835	352,055	301,575	223,186	161,900	50,081	3,088
	{ Females	23,767	116,554	343,026	285,098	189,948	140,477	42,226	1,344
1891	{ Males	25,989	124,384	358,283	304,156	227,159	165,692	51,130	2,550
	{ Females	24,615	119,708	348,686	290,001	194,684	144,091	43,261	1,135
1892	{ Males	26,791	127,833	364,512	306,737	231,183	169,483	52,230	2,017
	{ Females	25,462	122,851	354,347	294,909	199,425	147,704	44,296	926
1893	{ Males	27,593	131,832	370,740	308,318	235,206	173,275	53,329	1,483
	{ Females	26,310	126,000	360,007	299,816	204,166	151,318	45,830	716
1894	{ Males	28,895	134,831	376,968	311,899	239,229	177,066	54,428	950
	{ Females	27,157	129,148	365,667	304,724	208,907	154,931	46,865	507

NOTE.—Census years and data in bold-face type. The State census of 1874 afforded no data for this table except the number of children under five years of age. The State census of 1884 includes 206 persons of unknown sex.

Table 5.—Population of Michigan, by nativity, at certain important periods of age for the years 1870-94, inclusive.

Years.	Nativity.	Periods of age.							
		Under 1 year.	Under 5 years.	Under 15 years.	15 to 29.	30 to 44.	45 to 64.	Over 65 years.	Un-known age.
1870	{ Nat. born.	32,257	157,677	410,970	250,195	137,111	94,562	23,203	8
	{ For. born..	872	6,525	59,821	86,081	82,015	50,829	9,310	4
1871	{ Nat. born.	33,219	161,898	423,475	280,757	142,664	97,927	24,665	7
	{ For. born..	405	6,669	40,098	89,124	85,701	54,603	10,323	4
1872	{ Nat. born.	34,182	166,119	435,951	271,318	148,216	101,298	26,126	6
	{ For. born..	439	6,813	40,374	92,218	89,388	53,376	11,336	3
1873	{ Nat. born.	35,144	170,340	448,486	281,880	153,769	104,658	27,588	6
	{ For. born..	472	6,957	40,661	96,311	98,074	62,150	12,348	3
1874	{ Nat. born.	36,106	174,561	460,991	292,441	159,321	108,024	29,049	5
	{ For. born..	505	7,101	40,927	98,404	96,761	65,924	13,361	2
1875	{ Nat. born.	37,069	178,782	473,497	303,008	164,874	111,389	30,511	4
	{ For. born..	539	7,245	41,204	101,496	100,447	69,698	14,374	2
1876	{ Nat. born.	38,031	183,002	486,002	313,564	170,427	114,754	31,972	3
	{ For. born..	572	7,383	41,480	104,591	104,133	73,471	15,387	2
1877	{ Nat. born.	38,993	187,223	498,507	324,126	175,979	118,120	33,434	2
	{ For. born..	603	7,532	41,757	107,684	107,820	77,245	16,400	1
1878	{ Nat. born.	39,955	191,444	511,012	334,687	181,532	121,485	34,895	2
	{ For. born..	638	7,676	42,033	110,777	111,506	81,019	17,412	1
1879	{ Nat. born.	40,918	195,665	523,518	345,249	187,084	124,851	36,387	1
	{ For. born..	672	7,820	42,310	113,871	115,198	84,792	18,425	-----
1880	{ Nat. born.	41,880	199,886	536,023	355,810	192,637	128,216	37,818	-----
	{ For. born..	705	7,964	42,586	116,964	118,879	88,566	19,438	-----
1881	{ Nat. born.	43,643	208,377	545,772	362,887	197,877	131,483	39,192	77
	{ For. born..	657	8,907	47,836	124,941	124,695	93,221	20,777	97
1882	{ Nat. born.	45,406	206,868	555,521	369,964	208,117	134,751	40,566	154
	{ For. born..	610	9,850	53,065	132,918	130,512	97,876	22,116	195
1883	{ Nat. born.	47,169	210,359	565,269	377,041	208,356	138,018	41,940	231
	{ For. born..	562	10,793	58,335	140,895	136,328	102,531	23,454	292
1884	{ Nat. born.	48,982	213,850	575,018	384,118	213,596	141,985	43,814	308
	{ For. born..	514	11,786	63,584	148,872	142,144	107,186	24,793	589
1885	{ Nat. born.	48,885	216,647	585,359	392,021	220,312	146,292	45,270	827
	{ For. born..	479	10,906	62,656	149,916	144,965	111,184	26,862	492
1886	{ Nat. born.	48,837	219,444	595,700	399,924	227,027	151,299	47,227	1,346
	{ For. born..	445	10,076	61,729	150,959	147,826	115,141	28,930	594
1887	{ Nat. born.	48,790	222,241	606,041	407,827	233,743	156,306	49,183	1,265
	{ For. born..	410	9,247	60,801	152,003	150,667	119,119	30,999	697
1888	{ Nat. born.	48,743	225,038	616,331	415,729	240,458	161,312	51,139	2,385
	{ For. born..	375	8,417	59,873	153,046	153,508	123,096	33,068	799
1889	{ Nat. born.	48,695	227,835	626,722	423,632	247,174	166,319	53,096	2,904
	{ For. born..	341	8,587	58,946	154,090	156,349	127,074	35,136	903
1890	{ Nat. born.	48,648	230,632	637,063	431,535	253,889	171,826	55,052	3,423
	{ For. born..	306	6,757	58,018	155,133	159,190	131,051	37,205	1,004
1891	{ Nat. born.	50,305	237,472	650,489	438,976	259,182	174,964	55,504	2,798
	{ For. born..	299	6,565	56,480	155,180	162,961	134,818	38,868	887
1892	{ Nat. born.	51,963	244,311	663,915	446,417	264,475	178,608	55,955	2,173
	{ For. born..	291	6,373	54,943	155,229	166,138	138,585	40,570	770
1893	{ Nat. born.	53,819	251,150	677,341	453,858	269,768	182,241	56,407	1,547
	{ For. born..	284	6,181	53,406	155,276	169,804	142,351	42,253	652
1894	{ Nat. born.	55,276	257,990	690,767	461,299	275,061	185,879	56,858	922
	{ For. born..	276	5,989	51,868	155,324	173,075	146,118	43,985	555

NOTE.—Census years and data in bold-face type. The State census of 1874 afforded no data on nativity. In the U. S. census of 1880, 2,075, and in the U. S. census of 1890, 3,279 colored persons of foreign birth are included among the native-born, no separate statement of their distribution by ages being given. In the State census of 1884, 9,051 persons of unknown nativity are omitted.

Table 6.—*Number and per cent of population at certain important periods of age according to the United States censuses of 1870, 1880 and 1890, and the State censuses of 1874, 1884 and 1894.*

Periods of age.	United States census, 1870.		State census, 1874.		United States census, 1880.		State census, 1884.		United States census, 1890.		State census, 1894.	
	Number.	*Per cent.	Number.	*Per cent.	Number.	*Per cent.	Number.	*Per cent.	Number.	*Per cent.	Number.	*Per cent.
All ages	1,184,069	100.0	1,384,081	100.0	1,636,937	100.0	1,853,658	100.0	2,063,889	100.0	2,241,641	100.0
Under 1 year..	32,629	2.8	-----	-----	42,585	2.6	49,574	2.7	48,954	2.3	55,582	2.5
1-4 years, inclusive	131,573	11.1	-----	-----	165,265	10.1	176,399	9.5	188,435	9.0	208,427	9.3
Under 5 years.	184,202	15.5	181,855	13.0	207,850	12.7	225,978	12.2	237,889	11.4	263,979	11.8
5-14 years inclusive	286,589	24.2	-----	-----	370,759	22.6	418,851	22.3	457,692	21.9	478,656	21.4
Under 15 years.	450,791	38.1	-----	-----	579,609	35.3	589,824	31.5	695,081	33.8	742,835	33.2
15-29 years, inclusive	336,226	28.4	-----	-----	472,774	28.9	536,437	29.0	586,668	28.1	616,628	27.5
30-44 years, inclusive	219,126	18.5	-----	-----	311,516	19.0	357,893	19.3	413,079	19.8	448,136	20.0
45-64 years, inclusive	145,391	12.3	-----	-----	216,782	13.2	249,448	13.5	302,377	14.5	381,997	16.8
65 years and over	32,513	2.7	-----	-----	57,256	3.5	68,400	3.7	92,257	4.4	100,793	4.5
Unknown age.	12	-----	-----	-----	-----	-----	1,656	-----	4,427	-----	1,457	-----

* Exclusive of unknown ages.

Table 7 states the number of inhabitants of each nationality according to the censuses of 1880, 1890, and 1894. Exact statements by nationality are much more definite and valuable than the mere totals of general nativity, and the vital statistics of the births, marriages and deaths occurring in Michigan are for the first time presented, in the present report, with such distinctions. As the compilation by nationality has never been made in these reports prior to 1894, it was evidently needless to present other than the figures for census years in order to indicate the general rate of increase of population of each nationality.

VITAL STATISTICS AND POPULATION.

In Table 8 the course of registration in Michigan may be examined from its commencement in 1867 to the present time. The actual numbers of births, marriages and deaths returned for each year are stated, and also the corresponding rates per 1,000 population. While it should be understood that the absolute rates given in this table, except those for marriages, are far below the truth, it is probable that the returns of births and deaths are defective by about the same amount each year, and hence the variations of the birth-rates and death-rates shown in this table may be accepted as approximately reliable. To this statement an important exception must, unfortunately, be made in the rates given for the years 1887-91 for births, and also, though probably to a less extent, for deaths. This irregularity arose from fraudulent returns made from the city of Detroit; its nature and the probable amount of sophistication were explained in the report for 1892.*

* The footnote corresponding to this reference is given on the opposite page.

Table 7.—Foreign-born population of Michigan, by nationality, according to the United States censuses of 1880 and 1890, and the State census of 1894.

Nationality.	State census, 1894.	United States census, 1890.	United States census, 1880.
Total foreign-born population.....	570,855	543,880	388,508
Canada.....	200,447	181,416	148,866
England.....	48,591	55,354	43,202
Wales.....	723	769	880
Scotland.....	11,849	12,068	10,731
Ireland.....	35,221	39,065	43,413
Germany.....	143,057	135,509	89,065
Austria.....	4,651	3,639	1,025
Holland.....	32,868	29,410	17,177
Belgium.....	2,882	2,232	979
Switzerland.....	3,045	2,562	2,474
Norway.....	8,173	7,795	3,520
Sweden.....	28,197	27,366	9,412
Denmark.....	7,339	6,335	3,513
Russia.....	16,152	11,839	1,560
Hungary.....	439	637	193
Bohemia.....	2,757	2,311	1,789
Poland.....	15,366	15,609	5,421
France.....	2,849	5,182	3,203
Italy.....	3,397	3,068	555
All others.....	*2,852	1,584	1,560

* Includes China, 86; Australia, 135; Europe (unspecified country), 197; other countries, 2,170; Mexico, 54; South America, 64; Cuba and West Indies, 113; Unknown (foreign), 31. The number of Chinese should probably be 133 instead of 86. See note to Table 11. This discrepancy in the census data will probably be removed when the final report is published.

[The following footnote refers to the preceding page.]

* The irregularities in the returns from Wayne county, which have been alluded to in discussing Table 2 [Report of 1892], affect the birth-rates, and to a lesser degree the death-rates, for the years 1887 to 1891, inclusive. It is impossible to exactly determine the number of these fraudulent returns for each year, but on the assumption that the returns from Wayne county should have been fairly uniform for each year from 1886 to 1892, a deduction can be made in the total number of births and deaths returned in those years for the county and for the State that will probably lead to more correct conclusions when comparisons of the rates based thereon are made with previous years. We shall have, instead of the numbers given in the table, the following estimates for the years 1887-91:

	1887.	1888.	1889.	1890.	1891.
Number of births.....	42,156	42,091	44,833	42,916	45,561
Birth-rate per 1,000.....	21.5	21.0	21.9	20.5	21.3
Number of deaths.....	19,329	19,919	19,533	19,726	21,141
Death-rate per 1,000.....	9.9	9.9	9.7	9.4	9.9

The average birth-rate for the five-year period 1886-90 would be 21.3 instead of 23.8, the average death-rate 9.7 instead of 10.1; the rate of natural increase, 11.6 per 1,000, not 13.6. The series of birth-rates as altered appears more reasonable than before, there being a decrease in the birth-rate of every State in this country, with only four unimportant exceptions, during the decade 1880-90, as determined by the United States censuses.—*Twenty-sixth Michigan Registration Report, 1892, pp. 6, 8.*

Table 8.—*Number of marriages, births and deaths registered in Michigan from 1867 to 1894, with the excess of births over deaths for each year; also the rates per thousand of persons married, births, deaths and excess of births over deaths for each year based on populations of United States and State censuses, and estimated populations for inter-census years. (Still-births included in both births and deaths.)*

Years.	Population.	Registration returns, 1867-94.				Rates per 1,000 population.			
		Number of marriages.	Number of births.	Number of deaths.	Excess of births over deaths.	Persons married.	Births.	Deaths.	Excess of births over deaths.
1867*	993,902	4,312	14,000	4,409	9,591	-----	-----	-----	-----
1868.....	1,057,288	8,697	25,020	8,235	16,785	16.5	23.7	7.8	15.9
1869.....	1,120,673	8,459	27,093	9,145	17,948	15.1	24.2	8.2	16.0
1870†.....	1,184,059	9,791	26,663	10,766	15,897	16.5	22.5	9.1	13.4
1871.....	1,221,552	10,605	25,992	9,728	16,264	17.4	21.3	8.0	13.3
1872.....	1,259,045	10,752	27,993	13,371	14,622	17.1	22.2	10.6	11.6
1873.....	1,296,538	11,897	34,608	14,258	20,350	18.4	26.7	11.0	15.7
1874†.....	1,334,081	12,255	31,151	12,500	18,651	18.4	23.4	9.4	14.0
1875.....	1,384,515	11,851	31,968	11,990	19,968	17.1	23.1	8.7	14.4
1876.....	1,435,000	11,913	34,235	12,576	21,659	16.6	23.9	8.8	15.1
1877.....	1,485,484	11,899	33,395	12,919	20,476	16.0	22.5	8.7	13.8
1878.....	1,535,968	12,880	35,162	12,766	22,396	16.8	22.9	8.3	14.6
1879.....	1,586,453	13,892	34,122	14,407	19,715	17.5	21.5	9.1	12.4
1880†.....	1,636,937	14,935	35,323	16,102	19,221	18.2	21.6	9.8	11.7
1881.....	1,691,117	15,894	34,749	19,238	15,511	18.8	20.5	11.4	9.2
1882.....	1,745,298	16,830	37,026	16,425	20,601	19.3	21.2	9.4	11.8
1883.....	1,799,478	17,174	40,809	16,906	23,903	19.1	22.7	9.4	13.3
1884†.....	1,853,658	15,989	40,408	18,056	22,352	17.3	21.8	9.7	12.1
1885.....	1,893,697	15,885	42,119	16,646	25,473	16.8	22.2	8.8	13.5
1886.....	1,933,735	16,665	41,095	18,187	22,908	17.2	21.3	9.4	11.8
1887.....	1,973,774	17,179	46,226	19,482	26,744	17.4	23.4	9.9	13.5
1888.....	2,013,812	17,297	48,952	21,764	27,188	17.2	24.3	10.8	13.5
1889.....	2,053,851	18,317	49,272	20,315	28,957	17.8	24.0	9.9	14.1
1890†.....	2,093,889	18,664	52,306	21,642	30,664	17.8	25.0	10.3	14.6
1891.....	2,130,827	19,244	50,812	22,079	28,733	18.1	23.8	10.4	13.5
1892.....	2,167,765	20,107	46,221	21,729	24,492	18.6	21.3	10.0	11.3
1893.....	2,204,703	19,197	47,722	21,982	25,740	17.4	21.6	10.0	11.7
1894†.....	2,241,641	18,220	44,596	20,959	23,637	16.3	19.9	9.3	10.5

* From April 5 to December 31, 1867. This was the first year of State registration, and the returns are not comparable with later years when the system was fully established.

† Census years.

Table 9.—*Number of births and deaths exclusive of still-births registered in Michigan for the years 1867-94 inclusive; with rates per 1,000 population. Also the number of still-births registered for each year, still-birth rate per 1,000 population and ratio of still-births per thousand births and per thousand deaths.*

Years.	Population.	Registration returns, 1867-94.			Rates per 1,000 population.			Still-births per 1,000 births.	Still-births per 1,000 deaths.
		Number of births.	Number of deaths.	Number of still-births.	Births.	Deaths.	Still-births.		
1867*.....	998,902	13,979	4,409	† 21	-----	-----	-----	1.5	-----
1868.....	1,057,288	24,968	8,189	† 52	23.6	7.7	-----	2.1	5.6
1869.....	1,120,673	26,952	9,016	† 141	24.0	8.0	† .1	5.2	14.3
1870† ...	1,184,059	26,589	10,540	† 236	22.5	8.9	† .1	2.8	21.4
1871.....	1,221,552	25,904	9,460	† 88	21.2	7.7	† .1	3.4	28.3
1872.....	1,259,045	27,692	13,167	† 301	22.0	10.5	† .2	10.9	15.5
1873.....	1,296,538	34,260	13,984	† 348	26.4	10.8	† .2	10.2	19.6
1874† ...	1,334,081	30,687	12,086	464	23.0	9.0	.3	15.1	38.6
1875.....	1,384,515	31,329	11,961	629	22.6	8.2	.5	20.1	55.4
1876.....	1,435,000	33,589	11,930	646	23.4	8.3	.5	19.2	54.2
1877.....	1,435,434	32,675	12,199	720	22.0	8.2	.5	22.0	59.0
1878.....	1,535,968	34,369	11,973	793	22.4	7.7	.5	23.1	66.2
1879.....	1,586,453	33,373	13,658	749	21.0	8.6	.5	22.4	54.8
1880† ...	1,636,987	34,585	15,364	788	21.1	9.4	.5	21.3	48.0
1881.....	1,691,117	34,058	13,547	691	20.1	11.0	.4	20.3	37.3
1882.....	1,745,298	36,234	15,633	792	20.8	9.0	.5	21.9	50.7
1883.....	1,799,478	39,925	16,022	884	22.2	8.9	.5	22.1	55.2
1884† ...	1,853,658	39,489	17,187	919	21.3	9.2	.5	23.3	53.6
1885.....	1,893,697	41,111	15,638	1,008	21.7	8.3	.5	24.5	64.5
1886.....	1,933,735	40,186	17,278	909	20.8	8.9	.5	22.6	52.6
1887.....	1,973,774	45,329	18,585	897	23.0	9.4	.5	19.8	43.3
1888.....	2,013,812	47,594	20,406	1,353	23.6	10.1	.7	23.5	66.5
1889.....	2,053,851	48,070	19,113	1,202	23.4	9.3	.6	25.0	62.9
1890† ...	2,093,889	50,909	20,245	1,397	24.3	9.7	.7	27.4	69.0
1891.....	2,130,827	49,722	20,969	1,090	23.3	9.9	.5	21.9	51.9
1892.....	2,167,765	45,207	20,715	1,014	20.9	9.6	.5	22.4	49.0
1893.....	2,204,708	46,703	20,963	1,019	21.2	9.5	.5	21.8	43.6
1894† ...	2,241,641	43,594	19,957	1,002	19.4	8.9	.4	22.5	50.2

* From April 5 to December 31, 1867. This was the first year of State registration, and the returns are not comparable with later years when the system was fully established.

† Census years.

‡ For these years two statements are given of the number of still-births, the upper figures representing the number returned in births, the lower in deaths. In 1867 still-births were not compiled as deaths. Beginning with 1874, still-births returned in births and deaths have been compared, duplicates eliminated, and the true number of distinct cases entered in the tables of both births and deaths.

The birth-rates and death-rates given in Table 8 for Michigan are not strictly comparable with those of most other states or countries, even apart from the inaccuracy of the returns in this state under the present system of registration, on account of the inclusion of still-births. It is the prevailing practice to exclude these from deaths, and generally also from births, since they do not add to the population as the latter nor diminish it as the former. In the Michigan reports still-births have been included in all the tables, both of births and deaths, with, as a result, considerable inconvenience in some respects, especially as to the death-rate of children under one year and under five years. In Table 9 a statement is given of the number of still-births recorded for each year of registration, the corresponding still-birth-rates, and the birth-rates and death-rates with exclusion of still-births. It is there seen that still-births have constituted about two per cent of all births, and about five per cent of all deaths registered since 1875. Prior to that time the still-births returned in both births and deaths were not put together, as at present, so that different numbers were compiled for these two classes of returns. In 1867 also, the first year of registration, still-births were not compiled with deaths.

Table 10 enables the results of the various enumerations of births and deaths in Michigan that have been made in connection with the several United States and State censuses to be compared with one another, and with the results of the State registration. While the rates obtained by the census methods are somewhat higher than those by the annual registration, they are too low to correctly show the facts. All attempts to obtain vital statistics by enumeration after the close of the census year are necessarily imperfect. In this connection see also the table given on a previous page (page 6), showing the percentage relations of the two classes of returns, and also the superiority of the registration of marriages over the census enumeration.

Table 10.—Births, deaths and natural increase in Michigan, with rates per thousand population according to the United States censuses of 1870, 1880 and 1890, and the State censuses of 1874, 1884 and 1894.

Years.	Popula- tion.	Census returns.			Rates per 1,000 population.		
		Births.	Deaths.	Natural increase.	Births.	Deaths.	Natural increase.
National census of 1870.....	1,184,059	34,530	11,181	23,349	29.2	9.4	19.8
State census of 1874.....	1,334,031	-----	* 14,280	-----	-----	10.7	-----
National census of 1880.....	1,636,937	45,843	19,743	26,100	28.0	12.1	15.9
State census of 1884.....	1,853,658	53,775	19,979	33,796	29.0	10.7	18.3
National census of 1890.....	2,093,889	51,931	25,016	26,915	24.8	11.9	12.9
State census of 1894.....	2,241,641	59,889	23,796	36,093	26.7	10.6	16.1

* For calendar year 1873.

The elements of population by color, nativity and sex are presented in Table 11, according to the state census of 1894, in form convenient for comparison with the registration returns of births, marriages and deaths. Of course, only the general relations of the returns to the constituent populations of each class can be shown by such direct comparisons. In the succeeding parts of this report pains will be taken to fully state the facts that render certain rates incomparable, and to present accurate ratios in their stead, as far as the data permit. As an illustration of the character of the corrections required, the relative rates at which native-born and

POPULATION AND RETURNS BY COLOR, RACE AND NATIVITY. 23

foreign-born women became mothers in 1894, viz.: 29.8 and 72.8 per 1,000 corresponding population respectively, may be compared with the figures given in Table 36 (Part II), showing the rates corrected for age distribution. Among the native-born females in Table 11 are included many children below the childbearing age, the proportion of which class is much less among the foreign-born. Eliminating these, therefore, and obtaining the rates of children born per 1,000 women of childbearing age in each nativity, we have 67.3 children born of native mothers per 1,000 women of native birth aged from 15 to 44 years in the state; and 126.6 children born per 1,000 women of foreign birth of the corresponding age. The foreign-born women are seen to be more fertile in each case, but do not exceed the native-born by 144 per cent as seen in Table 11, but only by about 88 per cent. Corrections for age distribution are equally important in comparing death-rates.

It is not believed that the registration data in regard to color are sufficiently accurate to merit discussion. It is certain that there is much irregularity in making this return, and the small absolute number of colored persons in the state would cause any slight irregularity in the returns to be greatly magnified when stated as rates per thousand. In this connection it is of interest to note that the compiler of the state census deems the census returns of colored births to be "manifestly incomplete." The data were collected in much the same manner as the registered births.

Table 11.—Comparison, by sex, color and nativity, of the births, marriages and deaths returned for 1894, with the corresponding population as stated by the State census of 1894.

Color, race, and nativity.	Sex.	Population by State census of 1894.	Registration returns, 1894.†			Rates per 1,000 corresponding population.		
			Persons married.	Births. ‡	Deaths.	Persons married.	Births. ‡	Deaths.
All colors and nativities.....	Total.....	2,241,641	36,440	44,596	20,959	16.3	19.9	9.3
	Males.....	1,160,540	18,220	23,153	11,159	15.7	20.0	9.6
	Females.....	1,081,101	18,220	21,378	9,744	16.9	19.8	9.0
White.....	Total.....	2,218,484	36,078	44,252	20,596	16.3	19.9	9.3
	Males.....	1,148,438	18,041	22,997	10,972	15.7	20.0	9.6
	Females.....	1,070,046	18,037	21,206	9,581	16.8	19.8	8.9
Colored.....	Total.....	23,157	360	299	349	15.5	12.9	15.1
	Males.....	12,102	179	139	186	14.8	11.5	15.4
	Females.....	11,055	181	158	163	16.4	14.3	14.7
Colored, { Black..... Mulatto..... Indian..... Asiatic*.....	Total.....	8,306	190	131	198	20.4	14.9	22.5
	Total.....	7,432	75	58	53	10.1	7.8	7.1
	Total.....	6,760	105	110	98	15.5	16.3	14.5
	Total.....	157						
Native-born.....	Total.....	1,670,786	25,988	46,982	15,718	15.6	28.1	9.4
	Males.....	850,196	12,732	22,481	8,154	15.0	26.4	9.6
	Females.....	820,588	13,256	24,481	7,509	16.2	29.8	9.2
Foreign-born.....	Total.....	570,855	9,949	40,309	4,542	17.4	70.6	8.0
	Males.....	310,342	5,467	21,352	2,539	17.6	68.8	8.3
	Females.....	260,513	4,482	18,957	1,953	17.2	72.8	7.5

* Includes 138 Chinese, 7 Japanese, and 12 Arabs.

† Unknown sex, color and nativity, excluded from registration returns.

‡ The statements under this head in regard to nativity refer to the persons who became parents during the year, e. g., 22,481 native-born citizens became fathers (counting the fathers of twins twice), etc.

INTERNATIONAL VITAL STATISTICS.

Comparative rates of persons married, births and deaths are presented in Tables 12, 13, and 14 for certain countries of Europe, colonies of Australia and states of this country. The data for Europe are from the latest English Registrar-General's Report; for the colonies of Australasia from Mr. T. A. Coghlan's (Government Statistician) *Wealth and Progress of New South Wales* for the years 1883-92, other years being added from official sources; and for the American states from their latest reports. It is to be regretted that few of the states of this country present in their reports a clear statement of the results of registration for previous years, based upon carefully estimated populations. The story is only half told when the results of a single year are baldly set forth, without the historical background afforded by the properly presented data of previous years.

Table 12.—Persons married per 1,000 living population in certain countries and states during the years 1880-94.

Country or state.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.
Australasia	14.2	14.8	15.7	16.0	16.0	15.7	15.0	14.5	15.2	14.7	14.7	14.4	13.2	12.3	.....
New South Wales.....	.....	.....	.....	17.7	16.9	16.4	16.1	15.1	15.1	14.1	14.3	14.8	13.6	12.8	12.4
New Zealand .....	.....	.....	.....	13.7	13.9	13.4	12.0	12.0	12.0	11.9	12.2	12.1	12.5	12.4	12.3
Queensland .....	.....	.....	.....	17.9	17.8	17.9	16.9	16.8	17.9	16.5	16.4	14.4	13.3	11.8	11.4
South Australia .....	.....	.....	.....	17.1	16.7	15.7	12.7	12.7	13.3	13.1	14.0	14.6	12.8	12.5	12.2
Tasmania.....	.....	.....	.....	18.3	16.0	16.4	15.1	14.1	13.9	13.8	13.3	13.3	13.0	11.0	10.8
Victoria.....	.....	.....	.....	17.7	16.9	16.4	16.1	15.1	15.1	14.1	14.8	14.8	13.6	12.0	12.0
Western Australia.....	.....	.....	.....	13.8	14.0	13.7	15.5	14.9	13.8	13.5	11.8	16.1	14.7	12.7	12.5
Austria.....	15.3	16.0	16.4	15.7	15.7	15.2	15.6	15.6	15.8	15.0	15.1	15.4	15.6	15.9	.....
Belgium.....	14.1	14.1	13.9	13.5	13.5	13.6	13.4	14.2	14.2	14.5	14.5	14.8	15.4	15.2	15.1
Denmark.....	15.2	15.6	15.4	15.4	15.6	15.1	14.2	14.0	14.2	14.2	13.8	13.6	13.6	14.1	13.9
France.....	14.9	15.0	14.8	15.0	15.3	14.9	14.8	14.5	14.4	14.2	14.0	15.0	15.2	15.1	.....
German Empire.....	15.0	14.9	15.3	15.3	15.7	15.8	15.8	15.6	15.6	16.0	16.1	16.1	15.9	15.8	15.9
Prussia.....	15.3	15.3	15.3	15.9	16.2	16.4	16.2	16.0	16.0	16.3	16.4	16.3	16.1	16.1	16.1
Holland.....	15.0	14.6	14.3	14.2	14.4	13.9	13.9	14.0	13.8	13.9	14.2	14.2	14.4	14.6	14.4
Hungary.....	18.8	19.9	20.6	20.9	20.6	20.0	19.3	17.9	18.7	16.3	16.4	17.2	18.4	18.6	.....
Italy.....	13.9	16.2	15.6	16.1	16.5	16.0	15.9	15.9	15.9	15.4	14.7	15.0	15.0	14.7	15.0
Norway.....	13.3	12.8	13.4	13.2	13.7	13.3	13.0	12.5	12.2	12.5	13.0	13.2	12.7	12.9	12.8
Sweden.....	12.6	12.4	12.7	12.9	13.1	13.3	12.3	12.5	11.8	12.0	12.0	11.6	11.4	11.3	.....
Switzerland.....	13.7	13.6	13.6	13.7	13.8	13.9	13.8	14.2	14.1	14.1	14.1	14.3	14.7	14.7	14.9
United Kingdom.....	13.6	14.0	14.4	14.4	14.1	13.6	13.3	13.5	13.5	14.1	14.5	14.6	14.5	13.9	14.2
England and Wales.....	14.9	15.1	15.5	15.5	15.1	14.5	14.2	14.4	14.4	15.0	15.5	15.6	15.4	14.7	15.1
Ireland.....	7.8	8.5	8.6	8.5	9.1	8.6	8.4	8.6	8.4	9.0	8.9	9.2	9.3	9.4	9.4
Scotland.....	13.2	13.9	14.1	14.1	13.6	13.1	12.6	12.7	12.8	13.3	13.7	13.9	14.1	13.2	13.4
United States:															
Massachusetts.....	17.4	18.5	19.2	19.4	18.2	17.6	18.0	19.0	18.7	18.7	18.6	18.9	19.2	19.1	16.9
Michigan.....	18.2	18.8	19.3	19.1	17.3	16.8	17.2	17.4	17.2	17.8	17.8	18.1	18.6	17.4	16.3
New Hampshire.....	.....	.....	19.4	19.7	18.3	17.6	18.2	19.0	18.2	19.4	19.2	20.7	21.3	21.7	.....
Rhode Island.....	20.0	19.9	19.0	18.3	17.2	16.3	17.7	18.0	18.7	17.3	18.4	18.5	19.1	18.7	.....

The marriage rates given for Michigan are probably directly comparable with the returns of the countries given in Table 12,—at least since the year 1887, when the present excellent marriage license law went into effect. Prior to that time clergymen and justices were allowed ninety days in which to file their returns with the county clerks, and considerable negligence undoubtedly prevailed. Despite this fact, however, the marriage returns of Michigan have always been much more reliable than those of births and deaths, which, it is estimated, should be increased by about 60 per cent to equal the actual numbers that occurred. As there is no evidence that registration has materially improved in accuracy in Michigan, or that one year presents better results than any other, the variations in the recorded birth-rates and death-rates may probably be used for comparison with the variations in other states and countries without risk of serious error.

Table 13.—Births registered per 1,000 living population in certain countries and states during the years 1880-94. (Still-births excluded.)

Country or state.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.
Australasia	36.2	35.6	34.8	34.8	35.5	35.3	34.8	34.8	34.6	33.8	34.0	33.4	32.2	31.6	-----
New South Wales.....	-----	-----	-----	37.3	38.4	37.8	37.4	37.1	37.2	35.0	35.4	34.5	33.9	32.2	31.5
New Zealand.....	-----	38.0	37.3	36.5	36.2	34.7	33.2	32.1	31.3	30.2	29.4	29.0	27.8	27.5	27.3
Queensland.....	-----	-----	-----	37.1	36.0	37.1	38.2	38.9	39.1	38.1	40.0	36.6	35.8	33.7	31.9
South Australia.....	-----	-----	-----	37.5	38.6	38.7	36.0	34.4	33.6	32.8	32.5	33.9	31.9	31.7	30.5
Tasmania.....	-----	-----	-----	34.8	36.5	36.2	35.5	35.5	34.9	34.0	33.6	33.4	32.5	33.9	31.1
Victoria.....	-----	-----	-----	30.3	30.9	31.3	31.3	32.5	32.7	33.4	33.6	33.6	32.6	31.3	29.2
Western Australia.....	-----	-----	-----	33.6	33.4	34.5	38.2	36.6	34.5	35.0	33.1	34.6	33.0	34.1	27.5
Austria	38.0	37.7	39.1	38.2	38.4	37.4	38.0	38.2	37.9	37.9	36.7	38.1	36.2	37.9	-----
Belgium	31.1	31.4	31.2	30.5	30.5	29.9	29.6	29.4	29.1	29.5	28.7	29.6	28.9	29.5	29.0
Denmark	31.8	32.3	32.4	31.8	33.4	32.6	32.6	32.0	31.7	31.3	30.6	31.0	29.5	30.6	30.2
France	24.5	24.9	24.8	24.8	24.8	24.2	23.9	23.5	23.1	23.0	21.8	22.6	22.1	22.9	-----
German Empire	37.6	37.0	37.2	36.6	37.2	37.0	37.0	36.9	36.6	36.4	35.7	37.0	35.7	36.7	35.8
Prussia.....	37.8	37.0	37.6	37.1	37.6	37.8	37.7	37.6	37.4	37.1	36.6	37.7	36.3	37.5	36.6
Holland	35.5	35.0	35.3	34.3	34.9	34.4	34.6	33.7	33.7	33.2	32.9	33.7	32.0	33.8	32.7
Hungary	42.8	42.9	43.8	44.7	45.6	44.7	45.5	44.1	43.8	43.7	40.3	42.3	40.3	42.5	-----
Italy	33.9	38.0	37.0	32.7	39.0	38.5	37.0	39.0	37.6	38.4	35.9	37.3	36.3	36.6	35.7
Japan	24.0	25.6	24.9	26.4	27.8	26.9	27.3	27.1	29.6	30.2	-----	-----	-----	-----	-----
Norway	30.7	30.0	30.9	30.9	31.0	31.3	30.9	30.8	30.8	29.7	30.8	30.9	29.6	30.7	29.7
Sweden	29.4	29.1	29.4	28.9	30.0	29.4	29.8	29.7	28.8	27.7	28.0	28.3	27.0	27.4	-----
Switzerland	29.6	29.8	28.9	28.5	28.3	27.7	27.8	27.9	27.7	27.6	26.6	28.2	28.0	28.5	28.2
United Kingdom	32.7	32.5	32.3	32.0	32.2	31.6	31.5	30.7	30.1	30.0	29.2	30.4	29.5	29.9	28.9
England and Wales.....	34.2	33.9	33.8	33.5	33.6	32.9	32.8	31.9	31.2	31.1	30.2	31.4	30.5	30.8	29.6
Ireland.....	24.7	24.5	24.4	23.5	23.9	23.5	23.2	23.1	22.8	22.7	22.3	23.1	22.4	23.0	22.9
Scotland.....	33.6	33.7	33.4	32.7	33.7	32.7	32.9	31.8	31.3	30.9	30.2	31.2	30.7	31.0	30.1
United States*	31.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	26.7	-----	-----	-----	-----
Connecticut.....	22.2	22.4	23.9	25.4	23.0	22.7	22.2	22.8	22.2	23.4	23.3	24.8	24.7	25.4	24.9
Massachusetts.....	24.8	24.9	24.8	25.2	25.5	25.1	25.4	25.9	26.0	26.2	25.8	27.5	28.1	28.1	27.4
Michigan.....	21.1	20.1	20.8	22.2	21.3	21.7	20.8	21.1	20.3	21.3	19.8	20.8	20.9	21.2	19.4
New Hampshire*.....	-----	-----	-----	-----	17.4	17.5	18.2	18.8	17.4	18.5	18.4	19.9	20.8	22.2	-----

* Still-births included.

Table 14.—Deaths registered per 1,000 living population in certain countries and States during the years 1880-94. (Still-births excluded.)

Country or state.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.
Australasia	14.0	14.0	15.0	14.5	15.8	15.0	14.4	13.8	13.6	14.4	13.5	14.0	12.4	13.1	.....
New South Wales				14.6	16.1	16.5	15.1	13.4	13.9	13.9	12.9	14.2	12.2	13.3	12.3
New Zealand				11.5	10.5	10.7	10.5	10.3	9.5	9.5	9.7	10.4	10.1	10.2	10.2
Queensland				18.9	23.1	19.8	16.9	14.9	15.2	16.2	14.5	12.8	12.7	13.3	12.1
South Australia				15.1	15.8	12.9	14.0	13.1	12.5	11.5	12.7	13.3	11.3	13.4	11.6
Tasmania				17.3	15.9	15.9	15.2	16.2	14.9	15.0	14.8	15.0	13.5	13.5	12.4
Victoria				14.3	14.5	15.0	15.2	15.7	15.4	17.8	16.1	16.2	13.7	14.1	13.1
Western Australia				17.8	21.6	17.9	21.0	16.5	15.3	13.8	11.5	16.6	16.6	15.3	14.0
Austria	29.8	30.6	30.8	30.1	29.4	30.1	29.4	28.9	29.2	27.3	29.4	27.9	28.8	27.1	.....
Belgium	22.3	20.9	20.2	20.8	20.9	20.1	21.1	19.3	20.1	19.1	20.6	21.0	21.8	20.3	18.6
Denmark	20.4	18.3	19.3	18.4	18.4	17.9	18.2	18.3	19.7	18.6	19.0	20.0	19.4	18.9	17.5
France	22.8	22.0	22.2	22.2	22.2	21.9	22.5	22.0	21.8	20.5	22.6	22.6	22.6	22.8	.....
German Empire	26.0	25.5	25.7	25.9	26.0	25.7	26.2	24.2	23.7	23.7	24.4	23.4	24.1	24.6	22.3
Prussia	25.5	24.9	25.4	25.6	25.7	25.4	26.1	23.8	22.8	23.2	24.1	22.9	23.4	24.2	21.8
Holland	23.5	21.5	20.7	21.8	22.2	21.0	21.8	19.7	20.4	20.1	20.5	20.7	21.0	19.2	18.5
Hungary	37.1	34.4	35.3	32.1	31.0	31.8	31.6	33.7	32.0	29.8	32.3	33.1	35.0	31.1	.....
Italy	30.8	27.6	27.5	27.5	26.9	27.0	28.7	28.0	27.6	25.6	26.4	26.2	26.2	25.3	25.1
Japan	16.4	18.7	18.1	17.7	18.5	22.7	24.6	19.3	19.1	20.4	.....	.....	.....	.....	.....
Norway	15.9	16.8	18.4	17.1	16.4	16.5	16.1	16.0	16.9	17.4	17.9	17.5	17.8	16.3	16.9
Sweden	18.1	17.7	17.4	17.3	17.5	17.8	16.6	16.1	16.0	16.0	17.1	16.8	17.9	16.8	.....
Switzerland	21.9	22.4	21.9	20.4	20.2	21.3	20.7	20.2	19.9	20.3	20.9	20.8	19.3	20.5	20.7
United Kingdom	20.4	18.7	19.3	19.6	19.4	19.1	19.2	19.0	18.1	18.1	19.4	20.0	19.0	19.1	16.8
England and Wales	20.5	18.9	19.6	19.6	19.7	19.2	19.5	19.1	18.1	18.2	19.5	20.2	19.0	19.2	16.6
Ireland	19.8	17.5	17.3	19.2	17.5	18.4	17.8	18.2	17.9	17.4	18.2	18.4	19.4	17.9	18.2
Scotland	20.5	19.3	19.4	20.2	19.6	19.3	18.9	19.0	18.0	18.4	19.7	20.7	18.5	19.4	17.2
United States*	15.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.0	.....	.....	.....	.....
Connecticut	16.7	17.4	18.7	19.1	16.6	17.6	16.2	17.0	17.1	17.0	13.3	19.2	19.0	18.6	16.8
Massachusetts	19.8	20.1	19.9	20.1	19.4	19.6	18.6	19.9	19.9	19.2	19.4	19.7	20.8	20.5	19.1
Michigan	9.4	11.0	9.0	8.9	9.2	8.3	8.9	9.4	10.1	9.3	9.7	9.9	9.6	9.5	8.9
New Hampshire* .....	.....	.....	.....	.....	16.3	17.1	17.6	17.6	18.5	17.9	19.6	19.4	20.9	20.4	.....
Rhode Island	17.5	18.1	18.4	19.1	16.1	17.7	18.8	19.9	20.4	19.0	20.1	18.6	20.1	19.6	.....

* Still-births included.

BIRTH-, MARRIAGE- AND DEATH-RATES BY COUNTIES, 1894.

Table 15 presents the returns of births, marriages and deaths from each county of the State, together with the rates per 1,000 population according to the census of 1894.

The marriage-rates run much more uniformly than those of births and deaths, and probably represent the true relations of the counties with greater accuracy. A few exceptionally low rates may be noted, as Alcona, 11.1; Alpena, 13.3; Bay, 13.3; Gogebic, 11.6; Iosco, 11.2; Iron, 8.3; Keweenaw, 7.1; Macomb, 13.2; Menominee, 12.6; Muskegon, 11.7; Oakland, 13.1; Ottawa, 13.4; Presque Isle, 12.5. The appearance in this list of several very populous counties will be noted. The highest marriage-rates are shown for the counties of Baraga, Barry, Branch, Chippewa, Crawford, Emmet, Gladwin, Grand Traverse, Hillsdale, Kalkaska, Livingston, Luce, Missaukee, Ogemaw and Otsego, all of which exceed 20 persons married per 1,000 inhabitants.

Birth-rates are quite variable, although perhaps on the whole more uniform than death-rates. The highest rates recorded are for the following counties: Dickinson, 44.1; Gogebic, 39.2; Houghton, 41.1; Keweenaw, 32.4; Manistee, 30.2. The lowest rates are for the counties of Berrien, 14.9; Branch, 14.4; Calhoun, 14.2; Cass, 12.8; Clinton, 14.7; Eaton, 14.4; Genesee, 14.6; Gladwin, 10.0; Hillsdale, 11.4; Ingham, 14.7; Ionia, 13.0; Lapeer, 13.9; Lenawee, 13.0; Oakland, 12.2; Ogemaw, 9.8; Ontonagon, 11.5; Shiawassee, 13.2; St. Joseph, 11.8, and Tuscola, 14.2. The occurrence of some of the oldest and largest counties in the State in the latter list is very significant. Their presence is not accidental, but is due to the very low and still declining birth-rate among the native-born inhabitants of the State, of whom the population of the counties in question is chiefly constituted.

If the enumeration of deaths was accurately made in each part of the State, or even if the same degree of inaccuracy uniformly obtained in the several counties, the death-rates given in this table would be very suggestive as to the relative degrees of sanitary efficiency and climatic advantages enjoyed by the different portions of the State. These returns are, however, not reliable; the fact that one county apparently shows a higher death-rate than another is no evidence, under present conditions, that such is the actual truth concerning them. The accuracy of registration may even vary in the same county very widely from one year to another, and it is impossible, with the knowledge of local conditions obtainable by this Department, to make any very positive assertions as to the relative healthfulness of different portions of the State except in very general terms. It should not be forgotten, moreover, that the age and sex constitution of the inhabitants in different parts of the State, as well as their nativity, varies greatly.

Taking the returns as made, we have the following counties with especially high (relatively) death-rates: Branch, 11.6; Crawford, 12.5; Dickinson, 11.6; Gogebic, 11.0; Grand Traverse, 13.5; Houghton, 11.9; Ingham, 11.9; Manitou, 19.6; Menominee, 12.2; Saginaw, 11.2; Schoolcraft, 12.8; Wayne, 11.8. Counties having apparently very low death-rates are the following: Alcona, 5.9; Antrim, 6.9; Chippewa, 6.3; Clare, 4.5; Delta, 6.6; Gladwin, 2.7—see comparison with census on page 43; there were practically no returns from the city of Gladwin; Gratiot, 6.2; Kalkaska, 6.9; Keweenaw, 6.8; Montmorency, 5.8; Newaygo, 5.4; Ogemaw, 2.3—another disgraceful farce so far as correct registration is concerned, as shown by comparison with census returns on page 58; the most populous township, West Branch, made no returns at all, and owing to the county clerk's negligence and unjustifiable delay, a report could not be secured after it was ascertained that this was the case;

Oscoda, 1.7—very sparsely populated, but deaths do occur more numerous, as shown by census, page 59, following; Roscommon, 1.2—on a par with Gladwin, Ogemaw and Oscoda counties in neglect of supervisors or clerks to perform their duties under the law. Life in some of these counties would seem to be akin to immortality, judging from their death-rates. Of course, the very low death-rates simply show carelessness or inefficiency as a rule on the part of the officers whose duty it is to make the returns. Thus in Roscommon county, from which only two deaths were compiled for 1893, giving the absurdly low death-rate of 1.1 per 1,000 per annum, there occurred no less than seven deaths from diphtheria in one township (Roscommon), which were not reported to this Department until too late for compilation. In the present year the same number of deaths, 2, is reported, giving the ridiculously low death-rate of 1.2 per 1,000 population. But we know from the State census enumeration that at least 14 deaths occurred during the census year which overlaps the registration year (13 of these from one township, Higgins), which would give a rate of 8.5 per 1,000, and this is probably below the truth. Again, the returns from Ogemaw county were withheld by the county clerk, in spite of repeated requests from this Department, for over three months after the time at which the law requires them to be transmitted. When received, several important townships were omitted, and the county clerk's unauthorized delay precluded successful attempts to obtain the data in time for the present report. The law requires that all returns of births and deaths shall be made by the supervisors to the county clerks on or before June 1 of each year, and that the county clerks shall make their reports on or before the first day of September. Every effort is made by the State Department to secure promptness in these reports, both to the county clerk and to this Department, but it is found that a certain number of supervisors will delay as long as possible and evade the duty of enumeration entirely if possible. Delayed returns are added to the yearly tables as late as additions can be made without seriously embarrassing and delaying the work of compilation—up to December 1; at this date the tables close and all subsequent returns remain in the delinquent list.

Owing to the irregularities in the returns of birth and deaths from the different counties, not very much reliance can be placed upon the rates of natural increase or the excess of births over deaths per 1,000 population. The general indications, a high rate in the counties of the Upper Peninsula and in those containing the larger cities, with low rates for the agricultural communities of the southern part of the State, may be observed. The negative increase for the little county of Manitou, since disorganized, has no significance, being purely incidental to the small numbers involved.

BIRTH-, MARRIAGE- AND DEATH-RATES BY COUNTIES, 1894. 29

Table 15.—*Number of marriages, births, deaths and excess of births over deaths registered in Michigan for the year 1894, by counties, with rates per 1,000 population. (Still-births included in both births and deaths.)*

State and counties.	Population by State census, June, 1894.	Number of marriages registered, 1894.	Number of births registered, 1894.	Number of deaths registered, 1894.	Excess of births over deaths, 1894.	Rates per 1,000 population, 1894.			
						Persons married.	Births.	Deaths.	Natural increase.
State.....	2,241,641	18,220	44,596	20,959	23,637	16.3	19.9	9.3	10.5
Alcona.....	5,418	30	125	32	93	11.1	28.1	5.9	17.2
Alger.....	1,385	11	26	13	13	15.9	18.8	9.4	9.4
Allegan.....	39,189	356	714	367	347	18.2	18.2	9.4	8.9
Alpena.....	17,717	118	482	141	341	13.3	27.2	8.0	19.2
Antrim.....	12,427	110	208	86	122	17.7	16.7	6.9	9.8
Arenac.....	6,943	50	134	51	83	14.4	19.3	7.3	12.0
Baraga.....	4,232	44	110	35	75	20.8	26.0	8.3	17.7
Barry.....	23,699	256	382	177	205	21.6	16.1	7.5	8.7
Bay.....	61,304	409	1,505	506	999	13.3	24.5	8.3	16.3
Benzie.....	8,063	73	164	67	97	18.1	20.3	8.3	12.0
Berrien.....	45,635	407	681	396	285	17.8	14.9	8.7	6.2
Branch.....	26,207	268	378	302	76	20.5	14.4	11.6	2.9
Calhoun.....	47,472	430	676	396	278	18.1	14.2	8.4	5.9
Cass.....	21,176	174	260	175	85	16.4	12.3	8.3	4.0
Charlevoix.....	10,925	102	175	83	92	18.7	16.0	7.6	8.4
Cheboygan.....	13,900	130	354	137	217	18.7	25.5	9.9	15.6
Chippewa.....	15,322	163	324	96	228	21.8	21.1	6.3	14.9
Clare.....	7,976	62	161	36	125	15.5	20.2	4.5	15.7
Clinton.....	26,262	220	387	193	194	16.8	14.7	7.3	7.4
Crawford.....	2,710	35	51	34	17	25.8	18.8	12.5	6.3
Delta.....	19,262	159	426	128	298	16.5	22.1	6.6	15.5
Dickinson.....	14,700	110	648	170	478	15.0	44.1	11.6	32.6
Eaton.....	32,618	305	469	308	166	18.7	14.4	9.3	5.1
Emmet.....	10,382	110	177	81	96	21.2	17.0	7.8	9.2
Genesee.....	40,553	364	592	366	226	18.0	14.6	9.0	5.6
Gladwin.....	4,900	53	49	13	36	21.6	10.0	2.7	7.3
Gogebic.....	14,063	82	552	155	397	11.6	39.2	11.0	28.2
Gd. Traverse.....	17,515	200	310	237	73	22.8	17.7	13.5	4.2
Gratiot.....	28,776	281	458	179	279	19.5	15.9	6.2	9.7
Hilledale.....	30,272	325	344	242	102	21.5	11.4	8.0	3.4
Houghton.....	44,175	390	1,816	527	1,289	17.7	41.1	11.9	29.2
Huron.....	32,256	225	870	252	618	14.0	27.0	7.8	19.2
Ingham.....	39,689	357	582	471	111	18.0	14.7	11.9	2.8
Ionia.....	34,820	321	454	274	180	18.4	13.0	7.9	5.2
Iosco.....	12,340	69	281	99	182	11.2	22.8	8.0	14.7
Iron.....	5,293	22	128	37	91	8.3	24.2	7.0	17.2
Isabella.....	21,439	207	476	166	310	19.8	22.2	7.7	14.5
Jackson.....	46,535	370	781	467	314	15.9	16.8	10.0	6.7
Kalamazoo.....	42,056	390	697	445	252	18.5	16.6	10.6	6.0
Kalkaska.....	5,640	59	87	39	48	20.9	15.4	6.9	8.5
Kent.....	121,938	1,079	2,585	1,183	1,402	17.6	21.2	9.7	11.5
Keweenaw.....	2,805	10	91	19	72	7.1	32.4	6.8	25.7
Lake.....	5,897	42	118	57	61	14.2	20.0	9.7	10.3
Lapeer.....	28,879	242	401	202	199	16.8	13.9	7.0	6.9
Leelanau.....	9,395	60	243	94	149	12.8	25.9	10.0	15.9
Lenawee.....	48,541	379	633	428	205	15.6	13.0	8.8	4.2
Livingston.....	20,437	205	312	175	137	20.1	15.3	8.6	6.7
Luce.....	2,348	28	47	17	30	22.1	20.0	7.2	12.8
Mackinac.....	7,237	62	182	58	124	17.1	25.1	8.0	17.1
Macomb.....	32,887	214	590	291	299	13.2	18.2	9.0	9.2

Table 15.—CONCLUDED.—Returns and rates per 1,000 population, 1894.

Counties.	Popula- tion by State census, June, 1894.	Number of mar- riages regis- tered, 1894.	Number of births regis- tered, 1894.	Number of deaths regis- tered, 1894.	Excess of births over deaths, 1894.	Rates per 1,000 population, 1894.			
						Persons married.	Births.	Deaths.	Natural increase.
Manistee.....	26,114	191	790	246	544	14.6	30.2	9.4	20.8
Manitou.....	918	9	15	18	—3	19.6	16.3	19.6	—3.3
Marquette.....	38,008	261	1,071	356	715	14.0	28.2	9.4	18.8
Mason.....	18,422	129	448	180	268	14.0	24.3	9.8	14.5
Mecosta.....	20,729	168	370	187	183	16.2	17.8	9.0	8.8
Menominee.....	23,740	149	695	290	405	12.6	29.3	12.2	17.1
Midland.....	13,218	94	265	113	152	14.2	20.0	8.5	11.5
Missaukee.....	6,955	75	168	51	117	21.6	24.2	7.3	16.8
Monroe.....	33,181	271	603	355	248	16.3	18.2	10.7	7.5
Montcalm.....	34,158	300	545	250	295	17.6	16.0	7.3	8.6
Montmorency.....	2,438	17	58	13	45	14.0	23.8	5.3	18.5
Muskegon.....	37,324	218	770	344	426	11.7	20.6	9.2	11.4
Newaygo.....	19,125	156	331	103	228	16.3	17.3	5.4	11.9
Oakland.....	42,676	279	522	422	100	13.1	12.2	9.9	2.3
Oceana.....	16,599	151	265	129	136	18.2	16.0	7.8	8.2
Ogemaw.....	5,638	60	55	13	42	21.3	9.8	2.3	7.4
Ontonagon.....	6,873	58	79	48	31	16.9	11.5	7.0	4.5
Oscoda.....	16,475	122	371	153	218	14.8	22.5	9.3	13.2
Oscoda.....	1,806	18	31	3	28	19.9	17.2	1.7	15.5
Otsego.....	4,794	51	99	35	64	21.3	20.7	7.3	13.4
Ottawa.....	39,063	261	792	358	434	13.4	20.3	9.2	11.1
Presque Isle.....	5,911	37	171	47	124	12.5	28.9	8.0	21.0
Roscommon.....	1,657	16	31	2	29	19.3	18.7	1.2	17.5
Saginaw.....	81,847	602	1,866	919	947	14.7	22.8	11.2	11.6
Sanilac.....	33,945	256	694	274	420	15.1	20.4	8.1	12.4
Schoolcraft.....	7,127	66	194	91	103	18.5	27.2	12.8	14.5
Shiawassee.....	32,854	327	433	250	183	19.9	13.2	7.6	5.6
St. Clair.....	54,321	458	997	493	504	16.9	18.4	9.1	9.3
St. Joseph.....	25,087	212	297	244	53	16.9	11.8	9.7	2.1
Tuscola.....	34,412	258	489	192	297	15.0	14.2	5.6	8.6
Van Buren.....	31,059	254	487	326	161	16.4	15.7	10.5	5.2
Washtenaw.....	43,509	309	716	394	322	14.2	16.5	9.1	7.4
Wayne.....	292,461	2,082	6,876	3,443	3,433	14.2	23.5	11.8	11.7
Wexford.....	14,047	139	306	117	189	19.8	21.8	8.3	12.5

VARIATIONS IN RETURNS, BY COUNTIES, FROM 1893 TO 1894.

This table, introduced for the first time in the report for 1892, is regarded as a very important one, not only for the general interest of its contents, but because it calls direct attention to any marked variation in the returns of any class of statistics from individual counties, and thus precludes the imposition of fraudulent returns to a large amount from any county without detection, as was the case with the fraudulent returns from Wayne county for the years 1887-91.

There is a decrease in the number of marriages returned for 1894 of 977, as compared with the preceding year. The reasons for this decline have already been mentioned, so far as they apply to the State as a whole, and need not be further discussed. Of the 84 counties in the State, 45 show a decreased number of marriages; 37 a slight increase; and two counties, Montmorency and Van Buren, report exactly the same number for each year. The greatest losses are shown in Wayne county, 215; Bay, 45; Berrien, 64; Dickinson, 44; Gogebic, 64; Jackson, 50; Kent, 140; Lenawee, 72; Marquette, 72; Muskegon, 67; Ottawa, 57; Saginaw, 74; Washtenaw, 64. The greatest amount of gain is in Barry, 72; no other county shows a gain of any great numerical importance. The widely distributed decline is the most striking feature of the comparison.

Table 16.—Comparing, by counties, the total number of marriages, births and deaths registered in Michigan for the years 1893-94; showing also the increase (or decrease) of the number registered for 1894 as compared with that of the preceding year. (Still-births included in births and deaths.)

State and counties.	Marriages.			Births.			Deaths.		
	Number in 1894.	Number in 1893.	*In-crease or decrease.	Number in 1894.	Number in 1893.	*In-crease or decrease.	Number in 1894.	Number in 1893.	*In-crease or decrease.
State.....	18,220	19,197	-977	44,596	47,722	-3,126	20,959	21,982	-1,023
Aleona	30	25	5	125	105	20	32	63	-31
Alger	11	12	-1	26	18	8	13	7	6
Allegan	356	332	24	714	743	-29	367	432	-65
Alpena	118	152	-34	432	455	-27	141	228	-87
Antrim	110	90	20	208	209	-1	86	53	33
Arenac	50	49	1	134	151	-17	51	38	13
Baraga	44	34	10	110	146	-36	35	44	-9
Barry	256	184	72	332	370	-38	177	211	-34
Bay	409	454	-45	1,505	1,625	-120	506	708	-202
Benzie	73	75	-2	164	148	16	67	65	2
Berrien	407	471	-64	681	681	0	396	393	3
Branch	288	286	-18	378	357	21	302	273	29
Calhoun	430	433	-3	676	661	15	398	437	-39
Cass	174	206	-32	280	293	-13	175	173	2
Charlevoix	102	96	4	175	191	-16	83	75	8
Cheboygan	130	109	21	354	262	92	137	89	48
Chippewa	163	155	8	324	272	52	96	101	-5
Clare	62	71	-9	161	167	-6	36	59	-23
Clinton	220	253	-33	387	439	-52	193	205	-12
Crawford	35	33	2	51	38	13	34	20	14
Delta	159	173	-14	426	444	-18	128	175	-47
Dickinson	110	154	-44	648	590	58	170	247	-77
Eaton	305	295	10	469	409	60	308	271	37
Emmet	110	90	20	177	215	-38	81	86	-5
Genesee	364	345	19	592	667	-75	366	424	-58
Gladwin	53	33	20	49	72	-23	13	29	-16
Gogebic	82	146	-64	552	709	-157	155	257	-102
Gd. Traverse	200	196	4	310	279	31	237	196	41
Gratiot	281	263	18	458	499	-41	179	186	-7
Hillsdale	325	305	20	344	255	89	242	289	-47
Houghton	390	375	15	1,816	1,720	96	527	525	2
Huron	225	216	9	870	880	-10	252	300	-48
Ingham	357	338	19	532	605	-73	471	347	124
Ionia	321	323	-2	454	475	-21	274	306	-32
Iosco	69	93	-24	281	320	-39	99	120	-21
Iron	22	27	-5	128	144	-16	37	81	-44
Isabella	207	180	27	476	451	25	166	138	28
Jackson	370	420	-50	781	714	67	467	537	-70
Kalamazoo	390	412	-22	697	787	-90	445	459	-14
Kalkaska	59	41	18	87	96	-9	39	44	-5
Kent	1,079	1,219	-140	2,585	2,511	74	1,183	1,244	-61
Keweenaw	10	19	-9	91	104	-13	19	30	-11
Lake	42	54	-12	118	94	24	57	42	15
Lapeer	242	233	9	401	490	-89	202	217	-15
Leelanaw	60	73	-13	243	218	25	94	77	17
Lenawee	379	451	-72	633	656	-23	428	406	22
Livingston	205	192	13	312	310	2	175	186	-11
Luce	28	22	4	47	62	-15	17	30	-13
Mackinac	62	67	-5	182	115	67	58	46	12
Macomb	214	216	-2	590	591	-1	291	315	-24

* In many cases, which are indicated by the minus sign (-), a decrease is shown for 1894 as compared with the preceding year.

Table 16.—CONCLUDED.—Returns of 1893 and 1894 compared.

Counties.	Marriages.			Births.			Deaths.		
	Number in 1894.	Number in 1893.	*In-crease or decrease.	Number in 1894.	Number in 1893.	*In-crease or decrease.	Number in 1894.	Number in 1893.	*In-crease or decrease.
Manistee.....	191	222	-31	790	741	49	246	216	30
Manitou.....	9	4	5	15	22	-7	18	5	13
Marquette.....	261	333	-72	1,071	1,477	-406	356	491	-135
Mason.....	129	152	-23	448	487	-39	180	160	20
Mecosta.....	168	186	-18	370	371	-1	187	140	47
Menominee.....	149	174	-25	695	650	45	290	190	100
Midland.....	94	110	-16	285	249	16	113	87	26
Missaukee.....	75	59	16	168	180	-8	51	54	-3
Monroe.....	271	289	-18	603	635	-32	355	291	64
Montcalm.....	300	325	-25	545	571	-26	250	284	-14
Montmorency.....	17	17	-----	58	23	35	13	14	-1
Muskegon.....	218	285	-67	770	929	-159	344	412	-68
Newaygo.....	156	157	-1	331	325	6	103	86	17
Oakland.....	279	294	-15	522	554	-32	422	402	20
Oceana.....	151	141	10	265	312	-47	129	121	8
Ogemaw.....	60	48	12	55	107	-52	13	23	-10
Ontonagon.....	58	40	18	79	130	-51	48	31	17
Oscoda.....	122	139	-17	371	348	23	153	116	37
Oscoda.....	18	15	3	31	20	11	3	4	-1
Otsego.....	51	55	-4	99	76	23	35	43	-8
Ottawa.....	261	318	-57	792	969	-177	358	367	-9
Presque Isle.....	37	31	6	171	169	2	47	57	-10
Roscommon.....	16	17	-1	31	9	22	2	2	0
Saginaw.....	602	676	-74	1,866	2,238	-372	919	958	-39
Sanilac.....	256	247	9	694	830	-136	274	251	23
Schoolcraft.....	66	73	-7	194	199	-5	91	46	45
Shiawassee.....	327	300	27	433	419	14	250	254	-4
St. Clair.....	458	443	15	997	1,145	-148	493	566	-73
St. Joseph.....	212	239	-27	297	344	-47	244	220	24
Tuscola.....	258	257	1	439	631	-142	192	250	-58
Van Buren.....	254	254	-----	487	465	22	326	307	19
Washtenaw.....	309	373	-64	716	500	216	394	355	39
Wayne.....	2,082	2,297	-215	6,876	8,570	-1,694	3,443	3,834	-391
Wexford.....	139	134	5	306	254	52	117	91	26

* In many cases, which are indicated by the minus sign (-), a decrease is shown for 1894 as compared with the preceding year.

The State as a whole showed a decrease of 3,126 births for 1894 over 1893. Of the 84 counties composing the State, 46 showed a decline in the number of births reported; 37 returned an increased number; and one county, Berrien, returned exactly the same number for each year. The largest amounts of loss occurred in the counties of Wayne, 1,694; Bay, 120; Gogebic, 157; Marquette, 406; Muskegon, 159; Ottawa, 177; Saginaw, 372; Sanilac, 136; St. Clair, 148; Tuscola, 142. Gains were shown in Hillsdale, 89; Houghton, 96; Kent, 74; Washtenaw, 216. It is interesting to compare the distribution of the minus signs (showing diminution in the returns) in the column of births with those in the column of marriages. It was stated in the last report that "the effect of the hard times was primarily on the marriage-rate of the State; its secondary influence on the birth-rate may be expected to be seen more clearly in the report for the following year (1894) than in the present one. Indeed, its influence will probably be clearly shown in the vital statistics of the State for a number of years to come, by a tendency to a lower birth-rate and death-rate in the counties of the upper peninsula. It is, of course, possible that with the coming of prosperity again the pendulum may vibrate to the other extreme, and the net effects for a sufficiently long period be very minute."

This statement is fully borne out by the results of registration for the present year, as displayed in this table.

There were 1,023 fewer deaths reported for 1894 than for 1893. The counties showing the largest amounts of decrease are: Allegan, 65; Alpena, 87; Bay, 202; Benzie, 202; Genesee, 58; Gogebic, 102; Jackson, 70; Kent, 61; Marquette, 135; Muskegon, 68; St. Clair, 73; Tuscola, 58, and Wayne, 391. Counties showing considerable amounts of increase are the following: Cheboygan, 48; Ingham, 124; Menominee, 100; Monroe, 64; Schoolcraft, 45. Of course, variations in accuracy of registration may account for some of these changes.

VITAL STATISTICS OF CENSUS AND REGISTRATION COMPARED.

In the course of taking the State census the same data relative to the vital statistics of Michigan are collected that are annually collected by the supervisors and assessors under the State registration system. Neither the vital statistics collected by the census nor by the registration (so-called) are reliable, as is conclusively demonstrated by comparison of either set of returns of deaths with the numbers of deaths registered in the few localities in the State where immediate registration of deaths is required, under local ordinances, as a necessary preliminary to the granting of burial permits.* The advantage in accuracy is usually on the side of the census as regards births and deaths, since the data are collected for the year immediately preceding the enumeration, while an interval of absolutely wasted time amounting to three or four months elapses between the registration year and the process of registration. Marriages are the only vital statistics that are truly *registered* in this State, and the data collected under the present excellent license system are so much more perfect than the statistics of marriages collected by the census that no comparison is necessary.

In Table 17 the opportunity is taken of comparing the two sets of returns of births and deaths as presented by the census and the State registration system for each county, township, city, and ward in the State. Both sets of returns are confessedly imperfect, nevertheless the returns under the census may be taken as a sort of yardstick to measure the imperfections of the registration system, and to indicate, more or less clearly, just where the system has given the best and the poorest results. The census year embraces the months of June, 1893—May, 1894, both inclusive, while the registration is for the calendar year 1894. In cases where the census shows that a number of deaths occurred, while the registration shows that fewer or none were recorded, it is not proved that the latter is incorrect. The deaths may have occurred in the early part of the census year, 1893, and no equivalent deaths have occurred in the latter part of the registration year, 1894. But as a rule the births and deaths registered should approximately agree with those stated by the census. Five months of the census year, January to May, 1894, are included in the registration year, and the returns of births and deaths under the registration for the last seven months of the years 1893 and 1894 show that no very marked decrease in the birth-rate or the death-rate occurred.† Indeed, in some cases where it has been positively stated in the returns received at this Department that no deaths occurred in certain townships, it has been easy to show from the census that deaths did actually occur during months covered by the returns.

* See notes in regard to Grand Rapids and Detroit on pages 49 and 65, respectively, and also Part V of this Report, comparing the results of municipal and State registration of deaths for certain cities during the years 1890-94.

† There was a decrease in the number of births registered for the last seven months of 1894 as compared with 1893, amounting to 6.7 per cent; and of deaths, amounting to 5.0 per cent. So the registration should actually show slightly smaller returns, but not the large amount of discrepancy actually indicated.

It will be noted that few cities are returned by wards in the registration. Also in some cases births and deaths from townships and cities of the same name are not distinguished, all being compiled under the city, on account of lack of definiteness in the returns. A cipher, "0," indicates that an enumeration was made in accordance with law, and resulted in the discovery that no births or deaths had occurred. An interrogation mark, "?," indicates that no returns were made, and that it is uncertain whether any births or deaths occurred or not. Lists of the townships embraced under these classes are drawn off separately, and presented at the end of Part II for births, and of Section I, Part IV, for deaths.

Table 17.—Comparison of births and deaths enumerated by the State census (1893-94) and by the State system of registration (1894), by counties, townships, cities and wards. (Still-births included in both births and deaths.)

State, counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registration, 1894.	Census, 1893-94.	Registration, 1894.
State.....	2,241,641	59,889	44,596	23,796	20,939
Alcona Co.....	5,418	189	125	58	32
Alcona.....	985	42	19	8	10
Caledonia.....	233	7	4	1	1
Curtis.....	345	17	10	2	1
Greenbush.....	291	7	5	2	2
Gustin.....	608	22	16	9	1
Harrisville.....	1,391	35	26	14	6
Hawes.....	292	14	9	4	2
Haynes.....	791	26	22	12	7
Mikado.....	276	9	7	1	2
Millen.....	118	7	4	4	0
Mitchell.....	88	3	3	1	—
Alger Co.....	1,385	37	26	20	13
Autrain.....	280	11	6	5	3
Burt.....	240	3	5	4	4
Mathias.....	212	4	5	—	—
Munising.....	367	12	7	8	7
Onota.....	138	3	4	2	1
Rock River.....	148	4	6	1	5
Allegan Co.....	39,189	870	714	430	367
Allegan.....	3,892	73	51	59	27
Casco.....	1,810	44	39	23	12
Cheshire.....	1,348	31	19	12	15
Clyde.....	880	23	17	12	7
Dorr.....	1,837	44	42	10	18
Fillmore.....	2,019	49	43	13	8
Ganges.....	1,683	36	18	19	13
Gun Plain.....	2,494	45	32	30	36
Heath.....	853	22	15	15	7
Hopkins.....	1,775	31	34	18	14
Laketown.....	919	24	25	9	12
Lee.....	1,010	35	15	9	4
Leighton.....	1,242	27	29	16	9
Manlius.....	1,138	32	25	7	8
Martin.....	1,223	22	26	10	19
Monterey.....	1,437	27	29	15	8
Otsego.....	3,049	52	24	32	44
Overisal.....	1,764	46	60	16	23
Pine Plains.....	463	18	9	2	3
Salem.....	1,618	56	39	12	10

* Supervisor (or assessor) neglected to make returns.

Table 17.—CONTINUED.—*Comparison of births and deaths.*

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Allegan Co.—Continued:					
Saugatuck.....	2,429	39	37	32	24
Trowbridge.....	1,280	25	16	21	4
Watson.....	1,205	29	30	17	16
Wayland.....	1,841	40	38	21	24
Unspecified township.....			2		2
Alpena Co.....	17,717	560	482	489	141
Alpena.....	1,244	38	29	18	2
Green.....	504	20	22	4	4
Long Rapids.....	1,064	16	15	7	2
Maple Ridge.....	755	28	13	16	6
Ossineke.....	249	12	11	3	4
Sanborn.....	346	3	1	3	
Wilson.....	1,416	41	26	15	2
Unspecified township.....					1
Alpena City.....	12,139	402	* 365	128	* 120
1st ward.....	1,788	34		10	
2d ward.....	1,866	40		19	
3d ward.....	3,453	150		37	
4th ward.....	1,062	29		13	
5th ward.....	2,041	70		21	
6th ward.....	1,899	79		28	
Antrim Co.....	12,427	357	208	114	86
Banks.....	1,188	36	18	14	4
Central Lake.....	1,155	29	23	3	3
Chestonia.....	469	11	2	3	1
Custar.....	472	13	6	5	1
Echo.....	505	12	5	4	1
Elk Rapids.....	1,514	42	21	24	8
Forest Home.....	801	23	11	2	2
Helena.....	691	33	18	4	4
Jordan.....	450	11	9	6	5
Kearney.....	698	12	16	10	4
Mancelona.....	2,402	70	41	25	38
Milton.....	888	22	19	7	11
Star.....	463	13	4	3	1
Torch Lake.....	384	13	6	2	2
Warner.....	352	17	9	2	1
Arenac Co.....	6,943	228	134	62	51
Adams.....	255	8	6	1	2
Arenac.....	711	29	18	8	3
Au Gres.....	583	14	17	6	11
Clayton.....	730	23	14	13	6
Deep River.....	812	25	13	12	6
Lincoln.....	1,546	44	4	8	2
Mason.....	458	14	12	2	1
Moffitt.....	266	10	12	3	5
Standish.....	1,129	40	30	8	11
Turner.....	31	2	1		
Whitney.....	412	14	7	1	4
Baraga Co.....	4,232	149	110	39	35
Arvon.....	288	7	20	2	3
Baraga.....	1,718	64	46	16	13
Covington.....	68	1		10	
L'Anse.....	1,953	68	41	11	16
Spurr.....	185	9	3		3

* Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Barry Co.....	23,609	465	382	257	177
Assyria.....	1,086	26	17	14	9
Baltimore.....	1,223	17	25	6	9
Barry.....	1,205	18	25	13	18
Carlton.....	1,391	28	22	21	13
Castleton.....	2,500	46	29	26	10
Hastings.....	1,113	26	25	24	6
Hope.....	1,176	23	24	10	14
Irving.....	1,332	45	36	7	12
Johnstown.....	1,054	20	9	5	5
Maple Grove.....	1,241	25	24	8	7
Orangeville.....	944	18	11	12	6
Prairieville.....	982	17	18	10	9
Rutland.....	1,012	22	12	14	4
Thornapple.....	1,844	29	22	17	11
Woodland.....	1,746	36	34	18	8
Yankee Springs.....	766	18	15	14	5
Unspecified township.....			1		
Hastings City.....	3,014	51	* 33	38	* 31
1st ward.....	595	11		10	
2d ward.....	716	16		9	
3d ward.....	637	9		8	
4th ward.....	1,066	15		11	
Bay Co.....	61,304	1,825	1,505	630	506
Bangor.....	843	18	13	5	3
Beaver.....	1,236	40	37	20	13
Frankenlust.....	1,296	42	43	20	14
Fraser.....	1,444	53	32	11	6
Garfield.....	302	14	4	1	0
Gibson.....	494	19	14	4	3
Hampton.....	3,304	108	108	32	25
Kaw Kawlin.....	1,627	58	40	32	15
Merritt.....	1,217	46	34	19	13
Monitor.....	1,784	57	47	23	15
Mt. Forest.....	265	6	4	2	1
Pinconning.....	2,166	65	58	15	22
Portsmouth.....	1,222	35	18	11	3
Williams.....	1,752	50	26	12	11
Unspecified township.....					1
Bay City.....	30,042	799	* 726	264	† 260
1st ward.....	3,674	87		20	39
2d ward.....	1,679	16		14	8
3d ward.....	1,662	20		10	7
4th ward.....	4,346	109		26	30
5th ward.....	2,710	85		44	
6th ward.....	1,935	49		14	
7th ward.....	1,670	30		19	
8th ward.....	6,354	253		48	
9th ward.....	1,351	17		26	
10th ward.....	2,078	76		27	
11th ward.....	2,583	57		16	
Unspecified ward.....					176
West Bay City.....	12,340	415	* 301	159	* 101
1st ward.....	2,053	68		24	
2d ward.....	3,064	126		36	
3d ward.....	1,514	28		13	
4th ward.....	2,388	66		22	
5th ward.....	1,781	83		50	
6th ward.....	1,540	44		14	

* Not returned by wards.

† Not fully returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Benzie Co.	8,063	203	164	80	67
Almira.....	926	32	13	6	9
Bensonia.....	863	18	17	12	10
Blaine.....	639	14	19	5	4
Colfax.....	758	19	17	6	3
Crystal Lake.....	1,604	35	38	8	17
Gilmore.....	826	24	13	14	8
Homestead.....	368	9	8	4	1
Inland.....	649	14	9	3	2
Joyfield.....	288	9	13	6	5
Lake.....	171	4	2	1	0
Platte.....	285	8	5	3	3
Weldon.....	661	17	9	12	3
Unspecified township.....			1		2
Berrien Co.	45,635	1,074	681	446	396
Bainbridge.....	1,590	40	16	8	3
Benton.....	2,781	69	13	30	6
Berrien.....	1,520	33	25	23	23
Bertrand.....	1,073	23	20	33	7
Buchanan.....	2,826	43	17	18	28
Chickaming.....	964	34	30	7	13
Gallen.....	1,284	43	12	23	7
Hagar.....	969	23	16	12	0
Lake.....	1,845	43	51	5	15
Lincoln.....	1,924	72	31	9	8
New Buffalo.....	1,322	35	11	13	8
Niles.....	1,215	33	26	16	16
Oronoko.....	1,832	41	30	23	27
Pipestone.....	1,475	35	28	17	14
Royalton.....	1,208	39	26	19	7
Sodus.....	1,063	34	35	10	11
St. Joseph.....	1,078	21	24	6	6
Three Oaks.....	1,678	38	17	28	10
Watervliet.....	2,355	47	40	19	33
Weesaw.....	1,226	28	15	14	4
Benton Harbor City	5,315	110	† 83	44	† 32
1st ward.....	696	15		6	
2d ward.....	1,782	38		22	
3d ward.....	1,500	25			
4th ward.....	1,337	32		16	
Niles City	4,506	86	† 53	59	† 69
1st ward.....	1,531	33		18	
2d ward.....	837	11		10	
3d ward.....	1,140	19		22	
4th ward.....	1,000	23		9	
St. Joseph City	4,519	104	† 62	20	† 49
1st ward.....	2,266	45		11	
2d ward.....	2,253	59		9	
Branch Co.	26,207	493	378	316	302
Algansee.....	1,349	28	18	19	12
Batavia.....	1,089	22	28	13	13
Bethel.....	1,367	27	22	10	5
Bronson.....	1,976	41	37	21	29
Butler.....	1,197	27	13	25	20
California.....	862	24	16	11	15
Coldwater.....	1,419	18	14	19	12
Gilead.....	805	20	7	8	3
Girard.....	1,205	24	22	18	19
Kinderhook.....	631	25	10	10	6

* Third and fourth wards returned together.

† Seven of the deaths reported by the census occurred during January-May, 1894.

‡ Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Branch Co.—Continued:					
Mattison	1,147	22	15	9	6
Noble	617	16	12	8	1
Ovid	965	20	25	8	10
Quincy	2,412	35	20	34	24
Sherwood	1,354	24	23	12	13
Union	2,526	43	26	24	30
Coldwater City	5,286	77	* 70	67	* 84
1st ward	1,380	24	-----	19	-----
2d ward	1,478	17	-----	17	-----
3d ward	1,297	21	-----	20	-----
4th ward	1,131	15	-----	11	-----
Calhoun Co.	47,472	905	676	545	398
Albion	803	13	10	9	†
Athens	1,529	28	25	17	17
Battle Creek	1,013	15	18	7	†
Bedford	1,209	22	14	17	14
Burlington	1,357	32	24	22	11
Clarence	1,056	18	9	14	10
Clarendon	1,119	23	19	13	9
Convis	856	21	11	8	7
Eckford	1,062	19	14	19	10
Emmet	967	22	10	10	7
Fredonia	898	11	13	10	7
Homer	2,077	32	28	28	23
Lee	1,081	22	20	11	11
Le Roy	1,062	20	9	13	11
Marengo	1,061	20	12	15	6
Marshall	866	17	12	5	3
Newton	890	25	20	15	12
Pennfield	1,060	26	20	12	6
Sheridan	1,005	10	17	7	14
Tekonsha	1,506	31	27	26	15
Unspecified township	-----	-----	2	-----	-----
Albion City	4,844	95	* 61	60	* 57
1st ward	1,383	26	-----	15	-----
2d ward	1,488	31	-----	17	-----
3d ward	863	12	-----	12	-----
4th ward	1,110	26	-----	16	-----
Battle Creek City	15,522	306	* 230	158	* 117
1st ward	2,295	58	-----	14	-----
2d ward	2,488	65	-----	27	-----
3d ward	3,938	55	-----	46	-----
4th ward	3,249	55	-----	44	-----
5th ward	3,552	73	-----	27	-----
Marshall City	4,599	77	* 51	49	* 31
1st ward	798	12	-----	7	-----
2d ward	980	21	-----	17	-----
3d ward	1,532	24	-----	14	-----
4th ward	1,289	20	-----	11	-----
Cass Co.	21,176	431	280	246	175
Calvin	1,327	31	21	14	11
Howard	788	12	7	6	4
Jefferson	869	16	12	6	11
LaGrange	2,213	34	18	30	17
Marcellus	1,969	38	25	17	18
Mason	758	19	9	10	12

* Not returned by wards.

† Returns for township included with those of city of same name.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Cass Co.—Continued:					
Milton.....	425	11	5	11	3
Newberg.....	1,340	25	21	14	10
Ontwa.....	883	17	9	6	4
Penn.....	1,467	27	15	16	8
Pokagon.....	1,133	23	14	16	6
Porter.....	1,470	26	12	22	13
Silver Creek.....	875	20	6	12	6
Volinia.....	1,179	31	32	13	16
Wayne.....	917	22	16	10	9
Unspecified township.....			1		3
Dowagiac City.....	3,533	79	* 37	43	* 24
1st ward.....	1,264	31		10	
2d ward.....	1,048	19		20	
3d ward.....	1,221	29		18	
Charlevoix Co.....	10,925	310	175	83	83
Bay.....	548	15	5	2	3
Bear Lake.....	228	9	9	0	2
Boyne Valley.....	735	22	1	4	0
Chandler.....	212	5	8	1	1
Charlevoix.....	1,844	50	12	8	19
Evangeline.....	869	29	7	7	4
Eveline.....	899	18	17	6	7
Hayes.....	779	27	10	11	6
Hudson.....	128	1	7	2	0
Marion.....	552	13	7	7	3
Melrose.....	505	15	10	3	4
Norwood.....	456	9	13	6	2
Resort.....	233	10	7	4	8
South Arm.....	2,067	57	41	14	16
Springvale.....	192	7	2	3	0
Wilson.....	658	23	18	5	8
Unspecified township.....			1		
Cheboygan Co.....	13,900	450	354	152	137
Beaugrand.....	450	15	18	7	10
Benton.....	883	36	35	7	6
Burt.....	461	17	15	6	5
Ellis.....	163	2	0	0	0
Forest.....	154	7	5	0	0
Grant.....	490	13	21	12	8
Hebron.....	292	6	3	0	1
Inverness.....	1,475	59	42	15	14
Mackinaw.....	580	12	17	6	4
Mentor.....	379	7	11	7	3
Munro.....	282	6	13	0	1
Nunda.....	688	22	6	8	14
Tuscarora.....	429	11	9	5	4
Waverly.....	110	5	7	1	0
Wilmot.....	107	2	3	0	0
Cheboygan City.....	6,957	230	* 149	78	* 67
1st ward.....	549	20		0	
2d ward.....	2,380	103		42	
3d ward.....	1,441	40		7	
4th ward.....	1,721	46		14	
5th ward.....	866	21		15	

* Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Chippewa Co.	15,322	479	324	124	96
Bruce	962	22	1	10	*
Dafter	498	13	19	8	5
Detour	981	40	37	5	12
Drummond	408	12	*	5	*
Pickford	1,189	54	19	18	7
Raber	453	14	*	2	*
Rudyard	240	3	5	0	2
Sault Ste. Marie	662	15	10	7	3
Sugar Island	570	23	8	10	6
Superior	1,596	47	29	5	12
Trout Lake	89	3	0	0	0
White Fish	430	10	3	2	1
Sault Ste. Marie City	7,244	223	193	52	53
1st ward	2,267	78	74	22	26
2d ward	2,454	59	71	9	14
3d ward	1,650	52	27	8	5
4th ward	873	34	19	13	2
Unspecified ward			2		6
Clare Co.	7,976	251	161	70	36
Arthur	378	16	17	2	2
Franklin	178	6	2	3	3
Frost	174	5	3	2	1
Grant	833	26	18	5	4
Greenwood	405	17	9	6	3
Hamilton	343	14	1	3	0
Hatton	421	15	7	6	0
Hayes	171	3	1	1	0
Redding	326	8	3	2	0
Sheridan	805	20	28	3	2
Summerfield	130	5	8	1	2
Surrey	1,441	47	23	13	5
Winterfield	233	9	2	3	1
Unspecified township			1		
Clare City	1,392	36	† 23	11	† 6
1st ward	295	9		3	
2d ward	662	21		7	
3d ward	435	6		1	
Harrison City	746	24	† 15	9	† 7
1st ward	224	9		3	
2d ward	238	5		2	
3d ward	284	10		4	
Clinton Co.	26,262	529	387	230	193
Bath	1,135	33	19	15	8
Bengal	1,138	25	20	34	7
Bingham	4,532	70	81	6	61
Dallas	1,680	51	38	16	15
DeWitt	1,359	21	20	8	6
Du Plain	1,827	36	10	15	3
Eagle	1,189	23	16	10	1
Kaseex	1,494	25	10	16	7
Greenbush	1,452	34	13	14	8
Lebanon	1,239	27	16	7	4
Olive	1,214	18	16	15	8
Ovid	2,647	44	22	22	15
Riley	1,191	29	15	16	9

* Supervisor (or canvasser) neglected to make returns.

† Not returned by wards.

CENSUS AND REGISTRATION COMPARED BY TOWNSHIPS. 41

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Clinton Co.—Continued:					
Victor	1,089	23	30	12	12
Watertown	1,442	27	19	12	10
Westphalia	1,634	43	42	12	18
Unspecified township					1
Crawford Co.					
Crawford Co.	2,710	76	51	35	34
Ball	120	2	0	2	0
Beaver Creek	108	4	5	1	2
Blaine	97	3	3	1	3
Center Plains	152	6	4	3	0
Frederic	253	7	6	2	3
Grayling	1,565	47	32	20	21
Grove	95	1	0	0	0
Maple Forest	212	4	0	3	1
South Branch	108	2	1	3	3
Unspecified township					1
Delta Co.					
Delta Co.	19,262	692	426	200	128
Baldwin	460	10	10	2	1
Bark River	807	35	23	14	8
Bay De Noc	459	17	13	9	8
Escanaba	402	16	18	1	5
Fairbanks	312	7	5	0	7
Ford River	1,462	52	16	18	4
Garden	1,173	39	37	15	15
Maple Ridge	359	14	5	6	1
Masonville	1,934	57	12	18	4
Nahma	799	32	22	7	9
Sack Bay	206	8	0	0	1
Wells	632	22	15	5	4
Escanaba City	8,124	307	† 189	93	† 59
1st ward	929	25		5	
2d ward	963	12		4	
3d ward	1,700	69		18	
4th ward	1,625	64		16	
5th ward	1,206	50		6	
6th ward	1,399	78		40	
7th ward	283	9		1	
Gladstone City	2,131	76	† 66	17	† 9
1st ward	640	30			
2d ward	841	20			
3d ward	425	14			
4th ward	225	12			
Dickinson Co.					
Dickinson Co.	14,700	697	648	179	170
Breen	347	11	13	0	1
Breitung	520	17	9	4	4
Felch	589	24	27	7	9
Norway	1,201	77	37	23	17
Sagola	390	16	10	6	2
Waucedah	457	12	16	5	3
Iron Mountain City	7,639	383	407	109	83
1st ward	1,791	91	59	20	21
2d ward	1,337	67	72	14	11
3d ward	1,374	71	72	30	17
4th ward	1,509	79	106	15	11
5th ward	1,628	75	84	30	10
Unspecified ward			14		13

* Supervisor (or canvasser) neglected to make returns.

† Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Dickinson Co.—Continued:					
Norway City.....	3,587	157	129	23	57
1st ward.....	1,669	71	53	12	18
2d ward.....	1,087	42	31	6	16
3d ward.....	831	44	45	7	10
Unspecified ward.....					7
Eaton Co.....	32,618	631	469	380	303
Bellevue.....	1,954	38	34	15	23
Benton.....	1,533	35	30	19	19
Brookfield.....	1,306	36	17	21	20
Carmel.....	1,094	27	26	8	9
Chester.....	1,330	26	20	20	2
Delta.....	1,433	28	26	16	9
Eaton.....	1,058	18	22	10	13
Eaton Rapids.....	1,255	30	19	16	*
Hamlin.....	1,165	24	21	11	7
Kalamo.....	1,460	26	27	18	11
Oneida.....	1,229	23	12	8	11
Roxand.....	1,583	35	34	14	15
Sunfield.....	2,002	38	12	19	7
Vermontville.....	1,764	28	13	14	6
Walton.....	1,874	39	28	14	6
Windsor.....	1,793	36	30	22	17
Unspecified township.....					7
Charlotte City.....	4,350	62	† 32	54	† 35
1st ward.....	657	8		10	
2d ward.....	1,077	17		12	
3d ward.....	1,381	20		18	
4th ward.....	1,235	17		14	
Eaton Rapids City.....	2,157	33	† 29	27	† 42
1st ward.....	740	12			
2d ward.....	669	8			
3d ward.....	748	13			
Grand Ledge City.....	2,218	49	† 37	34	† 44
1st ward.....	1,214	27		19	
2d ward.....	1,004	22		15	
Emmet Co.....	10,382	285	177	139	81
Bear Creek.....	5,087	127	62	52	27
Bliss.....	239	5	4	3	0
Carp Lake.....	363	13	5	3	3
Center.....	253	5	4	6	2
Cross Village.....	464	15	22	10	10
Egleston.....	140	7	0	1	0
Friendship.....	388	12	7	4	2
Littlefield.....	866	26	12	10	3
Little Traverse.....	1,519	41	36	29	25
Maple River.....	375	14	9	7	2
Pleasant View.....	261	8	3	6	4
Readmond.....	427	12	13	8	3
Genesee Co.....	40,553	887	592	467	366
Argentine.....	1,018	23	19	14	12
Atlas.....	1,322	36	33	17	6
Burton.....	1,201	33	15	19	9
Clayton.....	1,282	22	16	4	12

* Returns for township included with those of city of same name.

† Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94. .	Registra- tion, 1894.
Genesee Co.—Continued:					
Davison	1,725	49	38	37	16
Fenton	3,956	70	29	33	23
Flint	1,304	30	18	21	12
Flushing	2,428	48	22	18	8
Forest	1,685	32	31	8	5
Gaines	1,734	52	39	26	25
Genesee	1,603	38	26	21	19
Grand Blanc	1,442	30	13	21	21
Montrose	1,640	38	30	18	12
Mt. Morris	1,226	31	30	13	11
Mundy	1,446	49	13	8	3
Richfield	1,482	46	33	16	12
Thetford	1,372	27	16	23	4
Vienna	2,267	51	28	23	23
Unspecified township					1
Flint City	10,420	182	143	127	§ 132
1st ward	3,278	63	43	50	46
2d ward	3,371	54	40	36	42
3d ward	2,357	41	49	25	
4th ward	1,414	24	2	16	
Unspecified ward			9		44
Gladwin Co.	4,900	155	49	43	13
Beaverton	645	17	8	1	6
Bentley	268	11	*	†	*
Billings	122	5	*	†	†
Buckeye	254	6	0	3	0
Butman	205	8	2	1	0
Clement	91	2	1	1	0
Gladwin	711	14	2	1	*
Grout	628	25	15	6	1
Sage	492	18	14	9	4
Sherman	161	6	4	6	1
Tobacco	441	13	†	1	†
Unspecified township			2		
Gladwin City	882	30	1	11	*
1st ward	263	11	*	5	0
2d ward	293	15	*	3	*
3d ward	144	1	0	2	0
4th ward	182	3	0	1	0
Unspecified ward			1		
Gogebie Co.	14,083	707	552	218	155
Bessemer	498	29	11	1	4
Ironwood	238	9	11	4	†
Marenisco	144	3	2	4	1
Wakefield	809	51	39	10	4
Watersmeet	542	14	6	3	2
Bessemer City	2,528	129	† 109	27	† 21
1st ward	682	22		10	
2d ward	565	23		5	
3d ward	615	41		4	
4th ward	150	13		4	
5th ward	516	30		4	

* Supervisor (or canvasser) neglected to make returns.

† Supervisor stated that returns were made to county clerk, but none were transmitted to this department.

‡ Not returned by wards.

§ Not fully returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Gogebic Co.—Continued:					
Ironwood City.....	9,324	472	† 374	169	† 123
1st ward.....	1,524	75	—	24	—
2d ward.....	707	27	—	6	—
3d ward.....	864	45	—	20	—
4th ward.....	1,274	59	—	22	—
5th ward.....	1,131	73	—	22	—
6th ward.....	1,598	81	—	25	—
7th ward.....	877	42	—	21	—
8th ward.....	1,349	70	—	29	—
Grand Traverse Co.	17,515	450	310	192	237
Acme.....	721	15	8	5	5
Blair.....	888	24	13	9	4
East Bay.....	485	15	14	2	7
Fife Lake.....	944	23	11	10	8
Garfield.....	974	29	13	7	6
Grant.....	539	16	9	6	4
Green Lake.....	492	23	19	9	2
Long Lake.....	644	19	21	5	6
Mayfield.....	666	22	7	3	1
Paradise.....	1,472	35	18	10	5
Peninsula.....	1,146	33	15	12	3
Traverse.....	7,382	163	133	* 105	181
Union.....	193	7	5	1	7
Whitewater.....	969	26	24	8	12
Gratiot Co.	28,776	658	458	283	179
Arcada.....	2,777	65	51	27	20
Bethany.....	1,531	46	32	15	13
Elba.....	1,643	38	30	10	9
Emerson.....	1,473	39	28	15	12
Fulton.....	1,788	35	13	18	9
Hamilton.....	707	18	20	6	6
Ithaca.....	2,132	45	25	20	8
Lafayette.....	1,459	49	30	24	12
Newark.....	1,258	33	17	20	4
New Haven.....	1,438	22	27	9	7
North Shade.....	1,388	31	14	16	10
North Star.....	1,606	39	17	13	8
Pine River.....	1,330	33	26	14	17
Seville.....	1,451	41	13	15	6
Sumner.....	1,413	20	26	10	9
Washington.....	1,383	33	28	13	10
Wheeler.....	1,793	34	32	22	13
Unspecified township.....	—	—	5	—	1
St. Louis City.....	2,204	37	† 24	16	† 5
1st ward.....	377	7	—	5	—
2d ward.....	445	9	—	4	—
3d ward.....	692	13	—	4	—
4th ward.....	690	8	—	3	—
Hillsdale Co.	30,272	525	344	355	242
Adams.....	1,642	21	13	23	10
Allen.....	1,388	28	18	21	9
Amboy.....	1,229	23	15	12	9
Cambria.....	1,468	33	20	31	23

* Includes 42 at asylum.

† Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Hillsdale Co.—Continued.					
Camden	1,950	30	26	20	6
Fayette	1,878	26	27	36	33
Hillsdale	468	6	4	7	3
Jefferson	1,676	28	21	19	13
Litchfield	1,642	20	17	11	15
Moscow	1,151	24	17	12	3
Pittsford	1,542	27	11	19	3
Ransom	1,366	26	14	8	7
Reading	2,085	38	26	32	21
Scipio	841	18	8	12	7
Somerset	1,192	26	20	16	6
Wheatland	1,242	18	18	11	9
Woodbridge	1,280	28	24	10	8
Wright	2,131	44	24	19	9
Unspecified township			3		1
Hillsdale City	4,121	61	18	36	* 47
1st ward	941	13	1	6	
2d ward	1,143	21	9	11	
3d ward	986	11	7	19	
4th ward	1,051	16	7		
Unspecified ward			8		
Houghton Co.	44,175	1,806	1,816	490	527
Adams	1,675	86	70	24	16
Calumet	16,686	742	872	120	272
Chassell	992	43	27	4	9
Duncan	969	26	7	6	3
Franklin	2,655	84	106	24	23
Hancock	4,345	172	181	68	43
Laird	231	4	2	0	1
Osceola	4,756	228	179	63	27
Portage	3,417	111	93	50	65
Quincy	1,490	49	54	9	20
Schoolcraft	3,891	120	114	33	43
Torch Lake	3,056	141	111	29	5
Huron Co.	32,256	1,062	870	307	252
Bingham	1,300	45	40	13	7
Bloomfield	814	31	16	4	6
Brookfield	785	25	18	2	3
Caseville	1,334	51	35	19	13
Chandler	1,163	37	34	4	13
Colfax	1,249	35	23	7	14
Dwight	1,468	49	38	11	7
Fair Haven	878	32	23	10	9
Gore	299	6	6	3	0
Grant	1,130	24	32	2	8
Hume	809	19	12	14	† 7
Huron	997	28	31	4	9
Lake	376	19	15	1	2
Lincoln	673	22	17	0	1
Meade	1,062	26	38	10	8
Oliver	1,391	62	46	12	8
Paris	1,731	73	56	54	37
Port Austin	1,547	49	42	20	17
Rubicon	1,173	30	35	5	9

* Not returned by wards.

† Supervisor stated that returns were made to county clerk, but none were transmitted to this Department.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Huron Co.—Continued:					
Sand Beach.....	2,595	63	61	27	24
Sebewaing.....	2,544	89	81	33	27
Sheridan.....	860	26	16	6	7
Sherman.....	1,795	60	57	22	5
Sigel.....	984	31	31	7	9
Verona.....	1,630	45	30	11	3
Winsor.....	1,649	85	37	6	4
Unspecified township.....					2
Ingham Co.....	39,689	830	582	443	471
Alaiedon.....	1,266	30	28	18	11
Aurelius.....	1,505	23	23	12	21
Bunker Hill.....	924	22	19	9	8
Delhi.....	1,576	32	39	27	13
Ingham.....	1,219	23	10	10	5
Lansing.....	1,378	35	18	16	8
Le Roy.....	1,436	32	33	9	14
Leslie.....	2,115	40	31	19	31
Locke.....	1,282	36	14	19	8
Meridian.....	1,730	48	14	29	12
Onondaga.....	1,421	15	11	14	14
Stockbridge.....	1,296	27	31	10	12
Vevay.....	935	7	9	9	5
Wheatfield.....	908	20	16	6	10
White Oak.....	967	19	14	6	5
Williamstown.....	2,108	49	32	26	31
Lansing City.....	15,847	344	* 217	172	* 236
1st ward.....	1,438	24		17	
2d ward.....	2,951	52		24	
3d ward.....	2,508	57		28	
4th ward.....	3,087	71		26	
5th ward.....	3,786	83		52	
6th ward.....	2,077	57		25	
Mason City.....	1,761	28	* 23	32	* 27
1st ward.....	967	12		13	
2d ward.....	794	16		19	
Ionia Co.....	34,820	701	454	409	274
Berlin.....	1,661	30	15	11	9
Boston.....	2,084	32	21	20	9
Campbell.....	1,690	39	29	14	13
Danby.....	1,292	23	22	17	17
Easton.....	1,888	23	15	21	11
Ionia.....	1,606	38	31	19	6
Keene.....	1,027	25	15	7	8
Lyons.....	2,538	47	34	41	17
North Plains.....	1,474	27	13	12	5
Odessa.....	2,360	62	35	28	19
Orange.....	1,124	21	10	14	4
Orleans.....	1,402	29	45	15	13
Otisco.....	1,254	18	5	24	7
Portland.....	2,640	52	33	44	42
Roland.....	1,313	25	13	29	16
Sebewa.....	1,427	26	9	4	5
Unspecified township.....					8
Belding City.....	3,006	74	* 43	33	* 13
1st ward.....	913	22		11	
2d ward.....	1,005	26		6	
3d ward.....	1,088	26		16	

* Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.*	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Ionia Co.—Continued:					
Ionia City.....	5,024	110	• 66	56	• 52
1st ward.....	1,203	27	-----	3	-----
2d ward.....	1,067	23	-----	19	-----
3d ward.....	1,223	29	-----	19	-----
4th ward.....	1,531	31	-----	15	-----
Iosco Co.	12,340	414	281	139	99
Alabaster.....	343	17	10	4	5
Au Sable.....	174	4	5	1	0
Baldwin.....	2,730	86	49	27	28
Burleigh.....	566	16	†	1	†
Grant.....	190	6	1	1	0
Oscoda.....	2,308	87	66	25	25
Plainfield.....	242	6	7	2	0
Reno.....	368	19	7	7	3
Sherman.....	249	13	8	4	2
Tawas.....	2,191	86	62	24	7
Wilber.....	323	7	†	6	0
Au Sable City.....	2,661	67	66	37	29
1st ward.....	980	25	12	7	7
2d ward.....	800	21	19	15	5
3d ward.....	901	21	35	15	15
Unspecified ward.....					2
Iron Co.	5,293	215	128	75	37
Atkinson.....	566	22	6	13	3
Bates.....	377	12	15	1	1
Crystal Falls.....	1,837	82	38	29	9
Hematite.....	264	17	9	7	1
Iron River.....	1,136	47	45	18	15
Mansfield.....	101	7	5	2	1
Mastodon.....	267	5	1	1	2
Stambaugh.....	645	23	9	4	5
Isabella Co.	21,439	642	476	196	166
Broomfield.....	800	27	12	4	3
Chippewa.....	835	25	25	11	6
Coe.....	1,857	47	23	26	7
Coldwater.....	1,145	36	8	16	4
Deerfield.....	1,139	43	37	8	8
Denver.....	960	37	23	14	9
Fremont.....	1,178	25	36	9	8
Gilmore.....	749	21	17	7	3
Isabella.....	1,711	65	51	18	21
Lincoln.....	1,263	34	25	4	7
Nottawa.....	997	28	34	7	6
Rolland.....	1,091	28	17	6	12
Sherman.....	626	17	10	8	3
Union.....	1,316	42	30	6	10
Vernon.....	1,321	45	33	15	15
Wise.....	1,073	39	28	13	6
Unspecified township.....			2		1
Mt. Pleasant City.....	3,178	85	• 65	26	• 37
1st ward.....	1,015	28	-----	8	-----
2d ward.....	1,078	26	-----	5	-----
3d ward.....	1,085	31	-----	13	-----

* Not returned by wards.

† Supervisor (or assessor) neglected to make returns.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Jackson Co.	46,535	965	781	478	467
Blackman	1,690	35	27	27	27
Columbia	1,801	27	15	19	11
Concord	1,307	19	18	30	25
Grass Lake	1,701	33	34	16	12
Hanover	1,446	30	28	14	19
Henrietta	1,172	20	15	19	3
Leoni	1,466	24	20	11	13
Liberty	960	25	19	6	10
Napoleon	1,028	17	16	12	12
Norvell	829	19	10	8	7
Parma	1,185	19	22	9	12
Pulaski	1,012	32	24	13	10
Rives	1,185	38	21	22	6
Sandstone	1,414	29	24	14	14
Spring Arbor	1,216	16	23	14	13
Springport	1,460	23	25	8	8
Summitt	1,045	23	21	7	7
Tompkins	1,086	17	15	12	9
Waterloo	1,119	32	18	16	22
Jackson City	22,615	487	* 386	201	* 227
1st ward	1,709	18	-----	12	-----
2d ward	2,601	68	-----	22	-----
3d ward	1,755	26	-----	11	-----
4th ward	3,472	54	-----	46	-----
5th ward	3,102	72	-----	13	-----
6th ward	3,386	92	-----	40	-----
7th ward	3,732	95	-----	38	-----
8th ward	2,658	62	-----	19	-----
Kalamazoo Co.	42,056	938	697	551	445
Alamo	1,128	21	23	10	9
Brady	1,408	38	24	9	12
Charleston	969	21	8	28	13
Climax	1,474	31	14	18	11
Comstock	1,774	30	20	27	19
Cooper	1,135	25	20	19	14
Kalamazoo	2,017	51	†	19	†
Oshkemo	1,284	24	19	14	9
Pavilion	1,029	20	12	9	7
Portage	895	22	11	9	3
Prairie Ronde	897	24	15	13	9
Richland	1,133	29	22	13	6
Ross	1,388	22	11	23	12
Schoolcraft	2,122	37	23	20	26
Texas	909	14	10	14	8
Wakeshma	1,440	44	30	18	8
Kalamazoo City	21,054	485	*† 435	288	*†† 279
1st ward	4,255	93	-----	41	-----
2d ward	5,622	153	-----	66	-----
3d ward	4,257	60	-----	91	-----
4th ward	4,390	111	-----	56	-----
5th ward	2,530	68	-----	34	-----

* Not returned by wards.

† Returns for township included with those of city of same name.
Includes 82 deaths at asylum.

Table 17.—CONTINUED.—*Comparison of births and deaths.*

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Kalkaska Co.	5,640	146	87	60	39
Boardman.....	725	20	4	12	2
Clearwater.....	596	16	12	2	1
Cold Springs.....	123	3	1	1	1
Excelsior.....	302	7	4	6	2
Garfield.....	165	2	4	1	0
Glade.....	122	2	1	0	0
Kalkaska	1,649	57	40	14	21
Oliver.....	69	3	2	0	1
Orange.....	421	3	1	2	1
Rapid River.....	716	16	9	11	6
Springfield.....	540	13	8	8	3
Wilson.....	210	4	1	3	1
Kent Co.	121,938	3,111	2,585	1,194	1,183
Ada.....	1,386	35	13	11	6
Algoma.....	2,196	53	22	25	5
Alpine.....	1,529	31	32	13	10
Bowne.....	1,323	32	17	18	3
Byron.....	1,818	54	50	27	20
Caledonia.....	1,729	39	30	27	4
Cannon.....	1,158	32	28	9	16
Cascade.....	1,286	25	24	10	17
Courtland.....	1,391	25	5	10	7
Gaines.....	1,369	27	29	6	4
Grand Rapids.....	2,183	35	24	55	42
Grattan.....	1,135	26	7	7	4
Lowell.....	3,299	58	43	23	25
Nelson.....	2,221	61	58	24	20
Oakfield.....	1,053	23	7	15	6
Paris.....	1,967	43	20	26	21
Plainfield.....	1,783	38	32	6	8
Solon.....	1,793	49	38	17	24
Sparta.....	2,722	61	44	33	14
Spencer.....	1,302	29	30	10	15
Tyrone.....	1,511	43	36	14	9
Vergennes.....	1,063	27	20	7	13
Walker.....	2,129	61	51	12	24
Wyoming.....	3,124	107	70	18	18
Unspecified township.....			1		1
Grand Rapids City	79,438	2,097	1,859	778	854
1st ward.....	6,715	165	186	77	
2d ward.....	4,351	109	90	44	
3d ward.....	7,383	132	115	66	
4th ward.....	7,850	153	128	49	
5th ward.....	9,763	307	239	107	
6th ward.....	9,706	345	304	97	
7th ward.....	6,711	185	167	42	
8th ward.....	3,606	83	93	36	
9th ward.....	4,903	114	79	42	
10th ward.....	7,496	192	107	115	
11th ward.....	6,178	145	141	58	
12th ward.....	4,764	167	117	45	
Unspecified ward.....			93		

* Six deaths returned but all for the year 1896.

† Includes 36 deaths in State Soldiers' Home.

‡ No report by enumerator.

§ Not returned by wards.

¶ Including still-births, there was actually registered in Grand Rapids, by the City Board of Health, no less than 1,162 deaths for the year ended December 31, 1894. This number is very nearly as great as that recorded for the entire county of Kent by either the State census or State registration system, and exceeds the number "registered" by the latter for Grand Rapids by 308. The results of the State registration would require to be increased, therefore, by at least 36.1 per cent to equal the true number that occurred.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Keweenaw Co.	2,805	91	91	25	19
Allouez	1,193	40	48	8	9
Eagle Harbor	473	14	19	9	4
Grant	139	5	0	2	0
Houghton	270	9	8	1	0
Sherman	730	23	16	5	6
Lake Co.	5,897	135	118	65	57
Chase	1,213	25	33	13	17
Cherry Valley	210	2	2	1	2
Dover	234	7	6	5	3
Eden	222	3	7	2	1
Elk	824	28	15	6	6
Ellsworth	935	16	22	14	13
Glencoe	214	4	7	4	1
Lake	89	2	0	0	1
Newkirk	739	14	20	7	2
Pinora	483	17	2	13	2
Pleasant Plains	446	14	17	0	7
Webber	83	1	1	0	2
Yates	205	2	0	0	7
Lapeer Co.	23,879	665	401	290	202
Almont	1,372	88	26	16	18
Arcada	1,232	36	10	20	3
Attica	1,467	32	24	19	14
Burlington	1,500	37	34	14	12
Burnside	1,377	62	42	17	15
Deerfield	1,039	29	20	12	9
Dryden	1,347	16	14	5	12
Elba	1,089	22	7	9	1
Goodland	1,163	28	27	13	10
Hadley	1,262	24	29	12	12
Imlay	2,496	60	43	26	20
Lapeer	936	25	15	14	7
Marathon	1,967	31	18	15	11
Mayfield	1,197	28	18	12	7
Metamora	1,307	28	16	29	13
North Branch	1,906	50	13	8	7
Oregon	1,167	27	17	5	5
Rich	1,213	42	17	10	7
Unspecified township					4
Lapeer City	2,952	50	† 11	34	† 15
1st ward	620	13		10	
2d ward	974	8		10	
3d ward	375	4		4	
4th ward	983	25		10	
Leelanau Co.	9,395	272	243	79	94
Bingham	769	20	21	5	9
Centerville	1,120	47	36	10	10
Cleveland	487	16	18	6	8
Elmwood	793	13	12	4	6
Empire	1,117	36	17	8	2
Glen Arbor	312	7	10	3	3

* Supervisor stated that returns were made to county clerk, but none were transmitted to this Department.

† Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Leelanau Co.—Continued:					
Kasson	650	16	20	2	8
Leelanau	1,594	43	33	16	20
Leland	880	18	24	4	6
Solon	517	17	5	8	2
Sutton's Bay	1,156	39	47	13	20
Lenawee Co.					
Adrian	48,541	955	633	570	428
Blissfield	1,626	17	*	20	3
Cambridge	2,182	59	16	9	2
Clinton	1,092	21	16	13	9
Deerfield	1,590	34	21	17	9
Dover	1,495	30	19	19	9
Fairfield	1,336	27	22	15	18
Franklin	2,151	40	27	29	15
Hudson	1,331	29	17	8	10
Macon	1,300	18	4	14	10
Madison	1,156	17	13	12	15
Medina	1,381	32	17	27	11
Ogden	1,596	35	9	35	6
Palmyra	2,046	69	50	24	10
Raisin	1,673	28	32	15	9
Ridgeway	1,432	35	11	15	4
Riga	1,490	48	10	12	25
Rollin	2,213	33	62	6	15
Rome	1,539	25	18	17	13
Seneca	1,183	17	17	15	7
Tecumseh	2,672	58	25	31	28
Woodstock	2,788	44	18	32	34
Adrian City	1,412	27	14	10	14
1st ward	9,511	171	† 180	143	† 115
2d ward	2,351	59	—	39	—
3d ward	3,156	58	—	46	—
4th ward	1,794	25	—	18	—
Hudson City	2,210	29	—	40	—
1st ward	2,346	41	† 35	32	† 37
2d ward	530	9	—	6	—
3d ward	972	14	—	15	—
4th ward	844	18	—	11	—
Livingston Co.					
Brighton	20,437	429	312	236	175
Cohoctah	1,649	22	21	30	18
Conway	1,283	25	23	15	16
Deerfield	1,264	28	27	11	7
Genoa	1,025	28	17	4	12
Green Oak	912	20	17	25	2
Hamburg	831	13	7	12	4
Hartland	870	22	14	16	12
Howell	2,092	30	15	18	11
Iosco	1,021	16	16	18	16
Marion	3,441	78	57	27	40
Oceola	894	26	7	11	6
Putnam	1,146	35	24	7	8
Tyrone	879	21	13	12	8
Unadilla	1,220	24	25	11	2
Unadilla	970	17	9	10	6
Unadilla	940	24	20	9	7

* Returns for township included with those of city of same name.

† Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Luce Co.....	2,348	102	47	27	17
Columbus.....	57	0	0	0	1
Lakefield.....	191	9	7	4	2
McMillan.....	1,912	88	37	22	14
Pentland.....	188	5	3	1	0
Mackinac Co.....	7,237	255	182	61	58
Brevort.....	291	10	3	2	1
Cedar.....	639	24	10	6	8
Garfield.....	971	34	14	0	5
Hendricks.....	204	8	5	0	0
Holmes.....	880	28	12	6	4
Marquette.....	382	13	16	4	4
Moran.....	370	17	9	7	2
Newton.....	1,071	50	44	13	9
Portage.....	158	5	5	2	3
St. Ignace.....	203	10	3	2	1
Unspecified township.....					1
St. Ignace City.....	2,068	56	61	19	20
1st ward.....	254	12	12	2	2
2d ward.....	639	21	22	7	7
3d ward.....	625	10	8	6	4
4th ward.....	550	13	17	4	5
Unspecified ward.....			2		2
Macomb Co.....	32,387	792	590	363	291
Armada.....	1,796	38	42	14	27
Bruce.....	1,949	40	37	7	23
Chesterfield.....	2,068	36	39	12	14
Clinton.....	1,874	61	37	26	8
Erin.....	2,405	86	52	30	26
Harrison.....	668	16	17	15	4
Lenox.....	2,266	49	29	20	28
Macomb.....	1,679	40	36	10	16
Ray.....	1,412	24	9	14	7
Richmond.....	2,385	48	29	24	17
Shelby.....	1,668	40	34	20	18
Sterling.....	1,985	62	50	34	16
Warren.....	2,592	97	63	44	22
Washington.....	1,973	27	21	32	32
Mt. Clemens City.....	5,649	133	* 95	61	* 33
1st ward.....	2,235	52		11	
2d ward.....	2,084	45		29	
3d ward.....	1,380	36		21	
Manistee Co.....	26,114	987	790	256	246
Arcadia.....	810	32	35	3	6
Bear Lake.....	1,343	42	28	12	9
Brown.....	805	20	8	5	8
Cleon.....	1,050	26	22	14	16
Filer.....	2,254	104	73	35	33
Manistee.....	3,025	135	91	33	25
Maple Grove.....	423	16	7	3	0
Morilla.....	361	9	6	3	7
Onkama.....	1,020	38	20	10	5
Pleasanton.....	637	15	9	2	6

* Not returned by wards.

† One of the three deaths reported by the census occurred in 1894.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Manistee Co.—Continued:					
Springdale	223	9	7	3	3
Stronack	713	32	26	4	4
Unspecified township			1		
Manistee City	13,450	509	457	129	* 123
1st ward	1,629	77	68	24	
2d ward	1,984	57	47	15	
3d ward	1,788	46	50	9	
4th ward	1,715	83	61	13	
5th ward	1,866	64	61	18	
6th ward	1,955	70	55	16	
7th ward	2,513	112	100	34	
Unspecified ward			15		1
Manitou Co.	918	27	15	15	18
Chandler	240	2	6	2	5
Galilee	82	0	1	0	1
North Manitou	96	3	1	0	0
Peaine	419	18	6	13	12
South Manitou	79	4	1	0	0
Marquette Co.	38,006	1,494	1,071	887	356
Champion	1,715	47	46	12	18
Chocolay	1,009	30	19	4	5
Ely	531	22	9	7	11
Forsyth	442	16	11	6	† 0
Humboldt	263	9	1	7	† 0
Ishpeming	799	26	17	6	2
Marquette	220	5		3	1
Michigamme	962	43	30	15	8
Negaunee	223	13	10	0	3
Republic	2,309	96	96	27	31
Richmond	693	35	34	15	12
Sands	243	7	†	3	†
Skandia	266	8	4	0	1
Tilden	832	36	43	6	8
Turin	143	2	1	1	0
West Branch			10		
Ishpeming City	11,687	549	* 386	141	* 73
1st ward	720	24		11	
2d ward	1,409	65		4	
3d ward	1,671	78		25	
4th ward	1,922	90		13	
5th ward	1,143	51		12	
6th ward	1,280	78		13	
7th ward	1,004	56		22	
8th ward	872	43		19	
9th ward	864	29		11	
10th ward	802	40		11	
Marquette City	9,726	289	* 222	72	* 131
1st ward	1,724	54		7	
2d ward	1,276	27		3	
3d ward	969	16		7	
4th ward	1,345	23		10	
5th ward	1,597	76		19	
6th ward	1,197	43		14	
7th ward	1,087	38		9	
8th ward	531	12		3	

* Not returned by wards.

† Two deaths in 1894 by census.

‡ Five deaths in 1894 by census.

§ Supervisor (or assessor) neglected to make returns.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Marquette Co.—Continued:					
<i>Negaunee City</i>	5,940	261	* 182	62	* 52
1st ward.....	1,364	57		11	
2d ward.....	1,136	56		24	
3d ward.....	722	16			
4th ward.....	1,489	67		13	
5th ward.....	1,229	65		14	
Mason Co.	18,422	583	448	170	180
Amber.....	1,295	37	28	19	23
Branch.....	355	11	12	3	5
Custer.....	1,513	47	26	20	11
Eden.....	648	27	7	11	4
Free Soil.....	915	24	23	6	6
Grant.....	414	16	10	2	3
Hamlin.....	216	6	5	3	5
Pere Marquette.....	991	46	27	6	10
Riverton.....	1,376	40	24	12	8
Sheridan.....	277	3	3	4	4
Sherman.....	780	26	17	8	4
Summit.....	559	17	8	11	2
Victory.....	839	27	23	3	9
Unspecified township.....					1
<i>Ludington City</i>	8,244	256	235	62	85
1st ward.....	1,200	40	36	12	13
2d ward.....	1,372	31	17	6	20
3d ward.....	1,583	55	48	15	12
4th ward.....	1,911	69	77	15	18
5th ward.....	1,920	55	38	12	10
6th ward.....	258	6	7	2	4
Unspecified ward.....			10		8
Mecosta Co.	20,729	543	370	209	187
Ætna.....	1,018	26	8	5	5
Austin.....	681	19	22	7	9
Big Rapids.....	665	16	8	1	3
Chippewa.....	975	35	12	13	4
Collax.....	882	16	20	6	7
Deerfield.....	1,369	40	10	11	5
Fork.....	739	17	11	9	6
Grant.....	597	25	22	10	7
Green.....	1,443	40	30	9	12
Hinton.....	1,232	42	17	8	9
Martiny.....	592	20	12	7	9
Mecosta.....	905	24	17	4	7
Millbrook.....	1,267	31	31	8	5
Morton.....	1,091	29	22	7	17
Sheridan.....	661	23	21	6	14
Wheatland.....	1,410	37	26	12	5
Unspecified township.....					1
<i>Big Rapids City</i>	5,202	108	81	86	62
1st ward.....	870	8	7	9	6
2d ward.....	797	12	18	12	8
3d ward.....	1,531	41	27	34	16
4th ward.....	873	12	10	10	3
5th ward.....	1,131	30	18	21	14
Unspecified ward.....			8		15

* Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Menominee Co.....	23,740	992	695	250	290
Cedarville	646	25	15	4	6
Holmes	414	11	*	4	0
Ingallston	523	19	4	4	2
Mellen	1,035	44	21	12	3
Menominee	869	32	25	11	10
Meyer	1,099	45	9	16	4
Nadeau	1,950	88	36	20	11
Spalding	1,945	74	23	7	6
Stephenson	2,727	93	8	18	4
Unspecified township.....					2
Menominee City.....	12,532	561	† 554	154	† 242
1st ward	2,006	58		15	
2d ward	2,392	93		23	
3d ward	1,718	88		16	
4th ward	1,741	79		25	
5th ward	1,497	80		38	
6th ward	1,773	96		22	
7th ward	1,405	68		20	
Midland Co.....	13,218	404	265	134	113
Edenville	541	12	5	5	2
Geneva	580	16	11	4	4
Greendale	167	6	6	1	0
Homer	587	12	18	3	5
Hope	825	22	15	2	2
Ingersoll	1,282	48	31	14	14
Jasper	753	31	15	7	4
Jerome	537	18	12	3	3
Larkin	807	38	22	11	7
Lee	282	8	9	3	5
Lincoln	294	11	6	3	6
Midland	1,114	27	25	18	14
Mills			1		
Mt. Hayley	541	21	14	8	1
Porter	638	17	3	4	2
Warren	1,791	50	20	19	7
Unspecified township.....					1
Midland City.....	2,484	67	† 52	29	36
1st ward	600	25		10	4
2d ward	851	11		9	11
3d ward	637	23		9	6
4th ward	396	8		1	14
Unspecified ward					1
Missaukee Co.....	6,955	223	168	69	51
Etna	328	14	12	1	1
Bloomfield	154	1	7	2	†
Caldwell	585	13	8	2	0
Clam Union	963	33	40	9	7
Forest	280	6	4	0	3
Lake	604	26	42	10	2
Norwich	325	9	3	1	†
Pioneer	202	5	5	0	1
Reeder	1,362	35	1	16	18
Richland	943	39	23	12	13
Riverside	1,046	35	17	15	3
West Branch	163	7	6	1	3

* Supervisor states that four births were reported to county clerk in June. They have not been transmitted to the State Department.

† Not returned by wards.

‡ Supervisor (or assessor) neglected to make returns.

Table 17,—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Monroe Co.	33,181	881	608	383	355
Ash.....	2,039	62	35	24	11
Bedford.....	2,075	56	56	20	19
Berlin.....	1,850	63	36	13	7
Dundee.....	3,303	61	41	44	61
Erie.....	1,476	50	38	21	7
Exeter.....	1,912	51	40	22	20
Frenchtown.....	1,958	47	35	10	15
Ida.....	1,594	51	44	16	17
LaSalle.....	1,333	51	30	17	25
London.....	1,373	43	21	17	23
Milan.....	2,105	60	35	17	25
Monroe.....	877	21	15	13	23
Raisinville.....	1,775	42	32	24	16
Summerfield.....	2,038	49	20	21	13
Whiteford.....	1,890	33	37	16	21
Unspecified township.....			2		1
Monroe City	5,613	141	* 88	88	51
1st ward.....	1,901	49		25	1
2d ward.....	985	20		11	10
3d ward.....	1,738	56		31	7
4th ward.....	989	16		21	9
Unspecified ward.....					24
Montcalm Co.	34,158	890	545	390	250
Belvidere.....	1,203	39	31	9	9
Bloomer.....	2,315	47	31	17	14
Bushnell.....	1,313	38	23	17	22
Cato.....	2,141	46	37	15	13
Crystal.....	1,447	27	32	17	17
Day.....	1,562	46	20	10	12
Douglass.....	1,170	41	10	13	4
Eureka.....	940	21	10	7	8
Evergreen.....	1,458	36	14	18	7
Fair Plain.....	1,389	33	22	18	9
Ferris.....	1,274	31	34	14	20
Home.....	1,654	31	15	6	3
Maple Valley.....	1,980	51	50	10	17
Montcalm.....	1,501	39	31	15	7
Pierson.....	1,334	39	35	9	12
Pine.....	1,211	31	28	11	5
Reynolds.....	2,094	49	21	26	9
Richland.....	1,093	30	20	17	3
Sidney.....	1,476	43	20	13	8
Winfield.....	1,207	31	18	17	4
Unspecified township.....			1		
Greenville City	3,113	64	* 28	39	* 35
1st ward.....	924	17		19	
2d ward.....	1,153	22		11	
3d ward.....	1,036	25		9	
Stanton City	1,303	22	* 14	12	* 12
1st ward.....	755	13		7	
2d ward.....	548	9		5	
Montmorency Co.	2,438	68	58	25	13
Albert.....	735	24	27	7	5
Briley.....	293	9	2	4	2
Hillman.....	594	14	5	11	3
Montmorency.....	265	3		†	0
Rust.....	291	9	13	†	0
Vienna.....	130	5	6	2	3
Wheatfield.....	130	4	2	1	0

* Not returned by wards.

† Enumerator neglected to report.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Muskegon Co.	37,324	1,024	770	385	344
Blue Lake	148	6	1	4	1
Casinova	1,840	34	30	8	6
Cedar Creek	388	8	8	4	3
Dalton	820	18	11	12	10
Eggleston	335	16	6	4	3
Fruitland	731	17	13	4	4
Fruitport	780	29	11	6	3
Holton	849	12	13	2	4
Laketon	436	14	9	2	4
Montague	1,665	34	15	25	24
Moorland	909	33	20	14	8
Muskegon	1,552	57	27	13	7
Norton	1,155	33	29	6	7
Ravenna	1,524	36	40	19	16
Sullivan	513	15	12	4	4
Whitehall	1,850	52	31	27	19
White River	604	20	18	7	3
Muskegon City	20,224	559	* 461	215	* 214
1st ward	2,207	58	52	22	—
2d ward	2,983	109	96	36	—
3d ward	2,100	54	17	17	—
4th ward	1,784	24	—	18	—
5th ward	3,122	77	—	41	—
6th ward	3,296	88	—	28	—
7th ward	2,946	91	—	35	—
8th ward	1,774	58	—	18	—
North Muskegon City	911	31	* 15	9	* 4
1st ward	300	12	—	2	—
2d ward	368	11	—	4	—
3d ward	243	8	—	3	—
Newaygo Co.	19,125	546	331	172	108
Ashland	1,571	48	29	17	5
Barton	927	34	4	7	6
Beaver	439	21	16	4	2
Big Prairie	468	7	7	3	2
Bridgeton	584	14	16	5	3
Brooks	1,050	33	3	11	3
Croton	612	15	9	7	2
Dayton	2,071	45	37	14	13
Denver	1,063	28	21	13	13
Ensley	1,220	44	17	7	2
Everett	442	10	8	4	2
Garfield	1,436	35	39	16	14
Goodwell	392	13	6	3	0
Grant	431	15	9	2	1
Home	906	31	28	9	10
Lincoln	408	13	0	4	1
Monroe	738	22	4	4	1
Norwich	514	14	9	8	1
Sheridan	1,732	39	33	11	6
Sherman	731	23	26	6	5
Troy	277	12	4	2	0
Wilcox	1,046	30	6	15	11
Oakland Co.	42,676	830	522	556	422
Addison	1,182	27	11	9	9
Avon	2,182	45	31	22	46
Bloomfield	2,035	37	27	18	11
Brandon	1,274	25	10	13	15

* Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Oakland Co.—Continued:					
Commerce	1,135	19	10	13	4
Farmington	1,689	38	18	11	22
Groveland	926	25	22	13	12
Highland	1,376	22	16	18	7
Holly	2,146	37	29	37	37
Independence	1,297	30	16	16	13
Lyon	1,754	41	27	18	8
Millford	2,051	26	10	15	19
Novi	1,313	19	20	16	7
Oakland	907	17	14	8	11
Orion	1,368	26	27	16	22
Oxford	1,984	30	11	27	10
Pontiac	998	21	5	12	4
Rose	985	16	9	10	8
Royal Oak	1,835	40	29	15	23
Southfield	1,476	37	22	24	9
Springfield	1,035	24	19	14	9
Troy	1,501	40	27	12	5
Waterford	1,152	16	8	19	8
West Bloomfield	1,085	22	11	5	3
White Lake	803	18	16	9	10
Pontiac City	7,277	132	* 77	166	* 119
1st ward	1,044	27	-----	17	-----
2d ward	1,543	41	-----	24	-----
3d ward	1,383	27	-----	19	-----
4th ward	2,556	27	-----	94	-----
5th ward	751	10	-----	12	-----
Oceana Co.	16,599	411	265	174	129
Benona	1,167	37	18	11	12
Clay Banks	773	15	16	9	6
Colfax	182	5	2	6	1
Crystal	817	27	14	8	12
Elbridge	1,399	36	16	10	3
Ferry	937	30	28	10	12
Golden	1,012	21	11	17	9
Grant	860	20	14	14	5
Greenwood	546	9	12	3	3
Hart	2,236	51	24	22	13
Leavitt	871	21	18	4	4
Newfield	870	24	25	5	6
Otto	156	4	7	0	2
Pentwater	1,514	27	18	13	17
Shelby	2,400	58	27	32	12
Weare	859	26	15	10	12
Ogemaw Co.	5,638	192	55	53	13
Beaver Lake	97	4	2	2	†
Churchill	426	13	9	0	†
Cumming	373	14	12	1	3
Edwards	319	18	6	7	1
Foster	136	0	0	0	0
Goodar	172	4	†	0	†
Hill	77	5	1	1	1
Horton	282	6	†	3	†
Klacking	360	10	6	0	3
Logan	95	5	5	0	1

* Not returned by wards.

† The county clerk delayed making returns so long that the usual inquiries in regard to delinquent townships could not be made.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Ogemaw Co.—Continued:					
Mills.....	81	1	* 1	1	2
Ogemaw.....	162	4	* 1	3	1
Richland.....	623	27	* 1	5	1
Rose.....	629	21	14	5	2
West Branch.....	1,806	60	* 1	25	1
Ontonagon Co.					
Bohemia.....	6,873	247	79	55	48
Carp Lake.....	172	6	7	4	6
Greenland.....	53	1	0	1	1
Interior.....	232	4	1	4	3
McMillan.....	1,623	70	1	11	1
Ontonagon.....	1,782	72	1	17	1
Rockland.....	2,491	83	58	10	30
	520	11	13	8	8
Osceola Co.					
Burdell.....	16,475	450	371	148	153
Cedar.....	942	38	28	10	4
Evert.....	202	5	4	1	3
Hartwick.....	1,053	18	28	8	13
Hersey.....	526	16	12	9	7
	1,232	38	23	13	13
Highland.....	583	17	15	3	6
Le Roy.....	1,142	31	24	9	16
Lincoln.....	1,223	38	37	14	9
Marion.....	1,052	26	33	6	11
Middle Branch.....	282	10	4	4	5
Orient.....	749	21	22	6	15
Osceola.....	1,635	42	12	13	3
Richmond.....	3,510	79	66	25	28
Rose Lake.....	736	31	22	5	6
Sherman.....	1,016	24	13	12	1
Sylvan.....	592	21	25	10	10
Unspecified township.....					3
Oscoda Co.					
Atherton.....	1,806	64	31	15	3
Big Creek.....	69	3	2	0	0
Comins.....	180	2	4	2	0
Elmer.....	410	15	13	3	0
	351	5	4	5	0
Greenwood.....	79	4	0	1	1
Harmon.....	183	7	5	1	2
Mentor.....	449	24	1	3	1
Mount Pindus.....	85	4	2	0	0
Otsego Co.					
Bagley.....	4,794	142	99	65	35
Charlton.....	1,022	30	11	13	1
Chester.....	131	2	1	1	1
Corwith.....	212	9	11	9	2
	750	16	20	8	12
Dover.....	184	11	4	6	1
Elmira.....	566	17	12	3	5
Hayes.....	297	6	4	0	1
Livingston.....	1,120	33	12	17	4
Otsego Lake.....	512	18	25	8	8

* The county clerk delayed making returns so long that the usual inquiries in regard to delinquent townships could not be made.

† Supervisor (or assessor) neglected to make returns.

‡ Two deaths in this township during 1894 (Jan.-May) according to census.

§ Supervisor stated that returns were made to county clerk, but none were transmitted to this Department.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Ottawa Co.....	39,083	1,131	792	391	358
Allandale.....	1,499	50	45	14	11
Blendon.....	1,436	36	35	6	9
Chester.....	1,574	49	24	14	11
Crockery.....	1,275	35	24	12	8
Georgetown.....	1,891	56	41	13	12
Grand Haven.....	942	24	8	14	5
Holland.....	3,115	67	73	12	8
Jamestown.....	2,210	76	50	15	17
Olive.....	2,103	69	57	20	37
Polkton.....	2,630	61	34	38	22
Robinson.....	684	23	16	5	3
Spring Lake.....	1,970	48	16	22	13
Tallmage.....	1,459	35	29	12	12
Wright.....	1,641	48	38	20	19
Zeeland.....	3,073	89	62	31	21
Unspecified township.....					5
Grand Haven City.....	5,270	164	* 79	83	* 67
1st ward.....	1,115	39		24	
2d ward.....	383	17			
3d ward.....	2,402	81			
4th ward.....	920	27		59	
Holland City.....	6,307	201	* 161	60	* 78
1st ward.....	1,839	67		23	
2d ward.....	887	24		5	
3d ward.....	1,751	54		10	
4th ward.....	1,440	44		17	
5th ward.....	390	12		5	
Presque Isle Co.....	5,911	223	171	71	47
Allis.....	288	8	8	3	3
Bearinger.....	270	15	6	5	3
Belknap.....	969	21	26	8	11
Bismarck.....	134	3	1	2	0
Case.....	271	10	11	2	3
Krakow.....	410	15	12	3	3
Metz.....	587	15	17	20	3
Moltke.....	463	20	13	5	2
Posen.....	1,458	73	49	17	4
Presque Isle.....	176	3	3	1	2
Rogers.....	385	40	25	5	7
Unspecified township.....					6
Roscommon Co.....	1,657	44	31	14	2
Denton.....	65	2	1	1	0
Gerrish.....	64	2	4	0	1
Higgins.....	716	22	12	13	7
Markey.....	39	0	0	0	1
Nester.....	211	3	7	0	0
Richfield.....	79	3	2	0	1
Roscommon.....	186	1	3	0	1
St. Helens.....	297	11	9	0	0
Saginaw Co.....	81,847	2,144	1,966	844	919
Allbee.....	758	26	23	13	11
Birch Run.....	1,496	34	19	17	4
Blumfield.....	1,444	37	28	8	7
Brady.....	1,514	38	32	10	12
Brant.....	1,321	42	26	9	7
Bridgeport.....	1,935	41	51	28	24

* Not returned by wards.

† Included with first ward.

‡ Included with fourth ward.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Saginaw Co.—Continued:					
Buena Vista.....	3,302	82	107	11	43
Carrollton.....	2,143	60	67	9	27
Chapin.....	789	21	15	2	3
Chesaning.....	2,356	46	29	21	15
Frankenmuth.....	1,982	72	52	21	19
Fremont.....	963	25	27	9	8
James.....	596	17	10	2	1
Jonesville.....	1,253	44	46	10	7
Kochville.....	908	29	22	7	3
Lakefield.....	582	21	21	6	2
Maple Grove.....	1,653	51	21	11	3
Marion.....	709	33	24	7	13
Richland.....	1,482	51	48	8	11
Saginaw.....	1,302	27	*	12	*
Spaulding.....	517	12	6	6	1
St. Charles.....	1,599	34	27	20	13
Swan Creek.....	594	14	15	4	2
Taymouth.....	1,736	68	41	21	25
Thomastown.....	1,184	17	12	25	6
Tittabawassee.....	1,650	45	27	17	13
Zilwaukee.....	1,421	45	33	10	13
Unspecified township.....					2
Saginaw City.....	44,643	1,117	† 1,040	520	† 624
1st ward.....	3,286	81		22	
2d ward.....	3,759	82		47	
3d ward.....	2,221	15		16	
4th ward.....	3,475	90		23	
5th ward.....	4,428	99		43	
6th ward.....	2,086	51		30	
7th ward.....	4,456	145		67	
8th ward.....	2,144	75		28	
9th ward.....	1,944	34		10	
10th ward.....	3,564	96		45	
11th ward.....	3,696	93		46	
12th ward.....	2,680	66		27	
13th ward.....	1,989	55		21	
14th ward.....	2,233	54		50	
15th ward.....	2,722	79		45	
Sanilac Co.....	33,945	1,006	694	317	274
Argyle.....	902	37	15	5	5
Austin.....	1,032	32	32	10	6
Bridgehampton.....	1,414	24	29	13	7
Buel.....	842	24	9	10	1
Custer.....	875	25	17	4	7
Delaware.....	2,225	74	62	35	22
Elk.....	1,501	47	41	14	20
Elmer.....	932	36	17	14	9
Evergreen.....	953	31	17	4	8
Flynn.....	907	31	20	11	7
Forrester.....	964	30	27	21	12
Fremont.....	1,031	34	18	10	5
Greenleaf.....	877	22	16	6	5
Lamotte.....	752	37	19	5	5
Lexington.....	2,909	66	47	22	18
Maple Valley.....	1,688	51	34	22	10
Marion.....	1,714	50	34	8	18
Marlette.....	2,463	79	56	5	36
Minden.....	1,133	29	19	20	7

* Returns for township included with those of city of same name.

† Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Sanilac Co.—Continued:					
Moore	902	32	25	16	4
Sanilac	1,761	45	24	25	19
Speaker	1,331	38	30	10	12
Washington	1,584	41	27	7	10
Watertown	1,398	39	28	7	8
Wheatland	566	21	3	5	1
Worth	1,289	31	27	8	12
Unspecified township			1		
Schoolcraft Co.					
Doyle	7,127	274	194	65	91
Germfask	621	27	7	10	6
Harrison	210	2	3	2	2
Hiawatha	558	20	7	6	7
Inwood	1,651	64	67	0	31
Manistique	308	13	15	4	4
Seney	2,436	98	61	34	33
Thompson	516	15	13	4	7
	827	35	21	5	8
Shiawassee Co.					
Antrim	32,854	647	433	278	250
Bennington	942	9	8	9	4
Burns	1,285	18	15	13	6
Caledonia	1,496	28	11	16	10
Fairfield	1,466	34	23	13	12
Hasleton	978	26	18	7	6
Middlebury	1,796	42	25	16	13
New Haven	910	17	14	9	8
Owosso	1,629	34	33	19	24
Perry	1,133	24	12	10	5
Rush	1,902	35	18	6	8
Sciota	1,347	43	27	11	3
Shiawassee	1,596	35	15	18	21
Venice	1,925	28	15	22	12
Vernon	1,289	25	8	5	3
Woodhull	2,477	38	17	8	7
Unspecified township	860	14	15	9	6
Corunna City					
1st ward	1,551	21	* 14	19	15
2d ward	675	10		5	5
3d ward	631	7		11	7
Unspecified ward	245	4		3	2
Owosso City					
1st ward	8,272	178	* 143	68	* 87
2d ward	2,288	39		25	
3d ward	2,007	40		16	
4th ward	1,270	34		7	
	2,707	65		20	
St. Clair Co.					
Berlin	54,321	1,405	997	601	493
Brockway	1,193	24	16	11	5
Burtchville	2,283	52	19	10	9
Casco	550	13	6	11	3
China	1,752	54	32	34	7
Clay	1,388	43	38	20	13
	1,952	58	38	23	9

* Not returned by wards.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
St. Clair Co.—Continued:					
Clyde.....	1,061	34	16	7	4
Columbus.....	1,127	25	24	23	12
Cottrellville.....	1,062	35	24	12	14
East China.....	272	7	2	3	1
Emmet.....	1,257	17	13	8	2
Fort Gratiot.....	840	20	18	2	8
Grant.....	1,015	20	9	6	6
Greenwood.....	1,391	32	30	10	18
Ira.....	1,461	51	18	17	4
Kenockee.....	1,332	47	34	21	11
Kimball.....	1,463	31	11	9	13
Lynn.....	838	19	14	11	12
Mussey.....	1,652	35	21	14	8
Port Huron.....	1,361	47	40	25	15
Riley.....	1,596	40	30	17	12
St. Clair.....	1,707	38	26	15	13
Wales.....	1,548	38	36	29	16
Unspecified township.....			1		11
Marine City.....	3,485	123	† 93	41	† 30
1st ward.....	1,399	50		21	
2d ward.....	939	20		8	
3d ward.....	1,177	53		12	
Port Huron City.....	18,140	436	† 336	186	† 203
1st ward.....	1,738	31		8	
2d ward.....	1,302	15		15	
3d ward.....	1,575	33		23	
4th ward.....	2,520	51		19	
5th ward.....	2,208	70		31	
6th ward.....	2,363	66		30	
7th ward.....	1,556	40		13	
8th ward.....	2,535	90		42	
9th ward.....	1,298	14		†	
10th ward.....	1,050	26		5	
St. Clair City.....	2,575	71	† 52	36	† 34
1st ward.....	1,239	33		18	
2d ward.....	1,336	38		18	
St. Joseph Co.....					
Burr Oak.....	25,087	449	297	244	244
Colon.....	1,645	33	39	24	25
Constantine.....	1,648	38	24	9	11
Fabius.....	1,975	23	15	25	24
Fawn River.....	923	11	14	9	6
Florence.....	592	17	14	8	10
Flowerfield.....	800	17	14	11	11
Leonidas.....	1,148	17	10	10	2
Lockport.....	1,313	19	15	6	10
Mendon.....	3,932	69	50	33	25
Mottville.....	1,828	39	8	16	16
Nottawa.....	564	13	8	5	4
Park.....	1,806	32	19	16	15
Sherman.....	1,072	25	13	16	11
Sturgis.....	951	20	10	13	11
White Pigeon.....	3,381	48	26	28	51
Unspecified township.....	1,497	28	15	15	12
			3		

* Includes 10 deaths at county house.

† Not returned by wards.

‡ Enumerator neglected to make return.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Tuscola Co.	34,412	873	489	343	192
Akron.....	1,847	70	27	26	15
Almer.....	1,330	33	15	20	7
Arbela.....	1,323	35	40	8	6
Columbia.....	1,578	42	43	13	15
Dayton.....	1,430	40	28	15	5
Denmark.....	1,942	45	38	23	15
Elkland.....	1,975	39	8	13	11
Ellington.....	830	13	5	7	3
Elmwood.....	1,602	40	20	15	11
Fair Grove.....	1,856	48	28	17	11
Fremont.....	2,021	53	34	13	9
Gilford.....	1,156	43	23	22	3
Indian Fields.....	2,524	48	7	31	4
Juniata.....	1,179	27	5	13	5
Kingston.....	1,225	39	28	14	8
Koylton.....	1,079	21	8	10	8
Millington.....	1,674	40	18	11	14
Novesta.....	1,005	34	15	5	4
Tuscola.....	1,314	34	31	19	11
Vassar.....	2,602	48	10	19	5
Watertown.....	1,343	37	28	10	14
Wells.....	919	27	18	11	5
Wisner.....	558	17	14	8	3
Van Buren Co.	31,059	675	487	350	326
Almena.....	880	18	22	7	8
Antwerp.....	1,856	23	32	17	40
Arlington.....	1,472	37	38	18	16
Bangor.....	2,379	60	44	24	17
Bloomingsdale.....	1,936	48	30	16	22
Columbia.....	1,716	42	32	21	14
Covert.....	1,336	27	13	23	12
Decatur.....	2,158	45	25	28	22
Geneva.....	1,464	25	32	15	8
Hamilton.....	914	20	8	10	5
Hartford.....	2,350	53	33	32	28
Keeler.....	1,052	25	22	12	8
Lawrence.....	1,713	35	35	13	23
Paw Paw.....	2,427	37	32	32	25
Pine Grove.....	1,786	41	23	17	22
Porter.....	1,097	32	28	14	17
South Haven.....	3,418	77	26	26	32
Waverly.....	1,096	27	12	5	7
Washtenaw Co.	43,509	862	716	473	394
Ann Arbor.....	1,091	22	5	9	*
Augusta.....	1,822	40	27	24	2
Bridgewater.....	1,064	26	19	14	11
Dexter.....	677	17	40	3	13
Freedom.....	1,082	34	29	13	11
Lima.....	990	14	37	3	7
Lodi.....	1,235	36	37	11	22
Lyndon.....	679	21	11	10	4
Manchester.....	2,117	36	43	21	21
Northfield.....	1,173	23	19	15	11
Pittsfield.....	1,141	24	12	16	11
Salem.....	1,203	25	24	9	11
Saline.....	1,645	29	14	17	7
Scio.....	1,893	29	16	15	8
Sharon.....	1,053	30	1	17	5
Superior.....	1,103	27	5	18	7

* Returns for township included with those of city of same name.

Table 17.—CONTINUED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Washtenaw Co.—Continued:					
Sylvan	2,349	37	28	30	20
Webster	840	22	15	12	10
York	1,844	42	32	20	30
Ypsilanti	1,303	24	20	14	*
Unspecified township					1
Ann Arbor City	11,089	209	† 240	127	† 146
1st ward	2,516	29		28	
2d ward	2,131	53		21	
3d ward	1,839	49		19	
4th ward	1,908	28		8	
5th ward	733	17		17	
6th ward	1,842	33		34	
Ypsilanti City	6,126	95	† 42	55	† 36
1st ward	1,327	28		18	
2d ward	1,078	8		7	
3d ward	1,508	17		12	
4th ward	713	10		2	
5th ward	1,500	32		16	
Wayne Co.	292,461	8,675	6,876	3,228	3,443
Brownstown	2,209	41	35	17	19
Canton	1,253	30	9	13	5
Dearborn	2,673	81	63	42	21
Ecorse	4,636	161	73	45	1
Greenfield	2,462	63	44	25	17
Grosse Point	3,375	101	19	35	27
Hamtramck	2,075	69	† 7	6	† 7
Huron	2,047	53	17	21	13
Livonia	1,521	40	24	22	9
Monguagon	2,259	63	32	16	21
Nankin	3,563	60	27	109	75
Plymouth	4,332	75	50	63	57
Redford	2,023	65	36	28	13
Romulus	1,885	50	31	15	13
Springwells	9,528	368	435	76	130
Sumpter	1,517	38	8	15	3
Taylor	1,303	48	26	14	7
Van Buren	1,793	30	22	19	13
Unspecified township			1		
Detroit City	237,798	7,121	5,863	§ 2,808	§ 2,958
1st ward	13,789	245	295	178	472
2d ward	10,804	91	77	92	55
3d ward	13,831	476	415	235	329
4th ward	13,385	199	119	153	101
5th ward	17,176	515	433	99	111
6th ward	15,321	295	274	157	218
7th ward	16,405	573	464	282	256
8th ward	14,533	333	303	126	156
9th ward	22,487	872	777	228	286
10th ward	18,343	517	352	180	172
11th ward	16,679	611	473	189	174
12th ward	15,299	526	300	146	108
13th ward	12,220	439	429	122	126
14th ward	11,157	422	283	135	97
15th ward	12,907	408	376	121	132
16th ward	13,462	599	514	165	155
Unspecified ward			29		45

* Returns for township included with those of city of same name.

† Not returned by wards.

‡ Supervisor (or assessor) neglected to make returns.

§ Inclusive of still-births, there was actually registered in Detroit, by the city board of health, for the year ended December 31, 1894, no less than 4,358 deaths. This number exceeds that recorded by the State system of registration by 1,490, showing conclusively that the latter would require to be increased by at least 48.3 per cent to equal the true number that occurred.

Table 17.—CONCLUDED.—Comparison of births and deaths.

Counties, townships, cities and wards.	Population, June 1, 1894.	Births.		Deaths.	
		Census, 1893-94.	Registra- tion, 1894.	Census, 1893-94.	Registra- tion, 1894.
Wayne Co.—Continued:					
Wyandotte City.....	4,209	118	* 61	39	* 41
1st ward.....	1,530	40		15	
2d ward.....	975	26		8	
3d ward.....	1,704	52		16	
Wexford Co.....	14,047	453	306	164	117
Antioch.....	630	19	11	7	5
Boon.....	840	33	20	8	5
Cedar Creek.....	1,829	59	39	24	15
Cherry Grove.....	342	7	9	4	4
Clam Lake.....	1,077	30	23	12	7
Colfax.....	628	22	14	5	5
Greenwood.....	325	14	9	5	8
Hanover.....	347	8	2	2	0
Harring.....	334	8	4	2	3
Henderson.....	212	5	9	1	3
Liberty.....	376	12	7	2	5
Selma.....	330	11	6	8	1
Slagle.....	157	9	5	1	0
Springville.....	625	20	9	8	12
South Branch.....	247	9	5	6	0
Wexford.....	643	19	10	18	11
Unspecified township.....					1
Cadillac City.....	5,105	168	* 124	51	* 37
1st ward.....	1,511	64		16	
2d ward.....	1,532	50		18	
3d ward.....	1,250	32		7	
4th ward.....	812	22		10	

* Not returned by wards.

DISTRIBUTION OF POPULATION BY GENERAL NATIVITY AND NATIONALITY.

Table 18, the data contained in which were kindly furnished for this Report by the Census Division of this Department, is of the greatest interest in itself, and of the highest importance in the light that it throws upon the vital statistics returned from the different counties of the State. Tables of births (parent-nationality), marriages and deaths have been prepared of corresponding form, and comparisons may be readily made with the corresponding population statistics here presented.

It will be found upon examination that certain nationalities tend to restrict themselves to special localities. Natives of Canada (in which are included the comparatively few persons born in other parts of British America than Canada proper) largely predominate in the counties of the Huron peninsula. Hollanders form over one-half of the entire foreign-born population of Kent county, and are present in considerable numbers in adjacent counties, while a comparatively small part of the total foreign-born population. Nearly one-third of the entire German population of the State is concentrated in the single county of Wayne (containing the city of Detroit); Swedes and Russians (mostly Finlanders) are settled most numerous in the mining counties of the Upper Peninsula, etc. On the other hand the English and Irish are scattered much more uniformly over the State at large, with comparatively few localities in which they largely predominate. These differences are in part due to the periods of immigration of the several nationalities; one like the Irish that has been present in the State for many years will naturally be more thoroughly diffused than the recent Polish or Russian immigration. Differences of language, religion and manners also affect the readiness with which foreign-born accessions of population mingle with the native inhabitants of the State.

In the State Census Report now preparing, a statement of the distribution by nationalities, together with the time of residence in this State, will be given. It is very important in studying the vital statistics of nationalities that the relative ages be known, as otherwise very misleading results may be obtained. This point will be referred to more fully under the tables showing the parent-rates, marriage-rates and death-rates by nationality in the following portions of this Report.

Table 18.—Population of Michigan, according to the State census of 1894, show

Line number.	State and counties.	General nativity.			Nationality of					
		Total.	Native born.	Foreign born.	Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
	State	2,241,641	1,670,786	570,855	200,447	49,314	11,849	35,221	143,067	4,651
1	Alcona	5,418	3,210	2,206	1,798	109	56	74	54	9
2	Alger	1,385	822	562	349	12	9	13	23	-----
3	Allegan	39,189	34,028	5,161	826	601	125	295	1,545	26
4	Alpena	17,717	9,971	7,746	4,393	336	185	292	1,453	22
5	Antrim	12,427	9,515	2,912	1,490	228	62	91	252	2
6	Arenac	6,943	4,560	2,383	1,817	96	104	62	225	11
7	Baraga	4,232	2,382	1,850	714	67	17	83	116	11
8	Barry	23,699	21,795	1,904	495	448	56	198	494	1
9	Bay	61,904	40,114	21,190	10,561	860	391	882	5,537	68
10	Benzie	8,063	6,471	1,592	683	120	29	57	156	2
11	Berrien	45,635	38,704	6,931	916	483	64	395	3,949	21
12	Branch	26,207	24,569	1,638	244	351	36	217	569	9
13	Calhoun	47,472	42,117	5,355	1,294	1,078	171	741	1,649	1
14	Cass	21,176	20,017	1,159	256	199	33	154	418	-----
15	Charlevoix	10,925	8,443	2,482	1,468	204	62	119	353	1
16	Cheboygan	13,900	8,921	4,979	3,218	220	102	251	555	4
17	Chippewa	15,322	8,676	6,646	6,514	461	252	396	187	3
18	Clare	7,976	5,934	2,042	1,509	104	29	85	226	-----
19	Clinton	26,262	23,530	2,732	764	488	44	188	1,132	6
20	Crawford	2,710	1,893	817	368	54	12	27	59	-----
21	Delta	19,262	10,834	8,428	3,442	189	82	492	924	22
22	Dickinson	14,700	6,635	8,065	1,593	1,182	24	100	442	667
23	Eaton	32,618	30,734	1,884	694	494	41	175	384	-----
24	Emmet	10,382	8,534	1,848	899	122	56	87	471	21
25	Genesee	40,553	34,724	5,829	3,085	1,099	196	693	606	5
26	Gladwin	4,900	3,474	1,426	1,145	70	24	60	98	1
27	Gogebic	14,083	6,603	7,480	613	1,256	28	470	536	384
28	G'd Traverse	17,515	13,774	3,741	1,516	288	67	216	610	54
29	Gratiot	28,776	26,175	2,601	1,415	410	69	177	377	7
30	Hilldale	30,272	28,644	1,628	285	526	44	333	369	1
31	Houghton	44,175	24,250	19,925	4,326	3,076	324	1,296	1,752	790
32	Huron	32,256	19,172	13,084	7,580	604	485	533	3,366	47
33	Ingham	39,689	34,788	4,901	1,429	695	138	363	1,982	11
34	Ionia	34,820	30,993	3,827	1,568	600	74	404	1,045	6
35	Iosco	12,340	7,490	4,850	2,956	189	85	164	712	21
36	Iron	5,298	2,864	2,429	517	205	35	102	249	64
37	Isabella	21,439	17,294	4,145	2,997	232	73	282	351	2
38	Jackson	46,535	40,079	6,456	1,414	1,686	206	927	1,712	27
39	Kalamazoo	42,056	34,871	7,185	971	807	195	695	1,050	10
40	Kalkaska	5,640	4,667	973	430	109	21	61	74	1
41	Kent	121,938	88,548	33,350	5,830	1,829	520	2,024	4,628	135
42	Keweenaw	2,805	1,435	1,370	157	228	8	40	112	22
43	Lake	5,897	4,218	1,679	775	80	19	56	195	5
44	Lapeer	28,879	22,237	6,642	4,162	543	296	355	1,149	11
45	Leelanau	9,395	6,996	2,399	549	106	16	85	663	71
46	Lenawee	48,541	43,363	5,158	740	902	90	957	2,243	2
47	Livingston	20,437	18,062	2,375	468	583	78	406	707	-----
48	Luce	2,348	1,054	1,294	748	33	22	41	38	1
49	MacKinac	7,237	4,630	2,607	1,642	98	71	173	174	7
50	Macomb	32,387	24,809	7,578	1,582	466	95	261	4,702	3
51	Manistee	26,114	16,315	9,799	1,421	253	66	162	2,919	43
52	Manitou	918	672	246	20	3	2	135	19	-----
53	Marquette	38,006	20,477	17,531	4,201	3,550	185	1,219	925	64
54	Mason	18,422	12,763	5,659	1,638	197	78	175	1,135	43
55	Mecosta	20,729	16,690	4,039	2,059	208	58	173	832	1
56	Menominee	23,740	13,502	10,238	3,212	110	43	187	1,806	301

ing general nativity and nationality of foreign-born inhabitants by counties.

foreign-born persons.

Hol- land.	Bel- gium.	Switzer- land.	Nor- way.	Sweden.	Den- mark.	Rus- sia.	Hun- gary.	Bohe- mia.	Pol- land.	France.	Italy.	All oth- ers.	Line number.
32,888	2,882	3,045	8,173	28,197	7,339	16,152	439	2,757	15,366	2,849	3,307	2,852	
		3	25	46	4	1			14	6	1	8	1
		3	5	98	41				6	2	1		2
1,291	7	55	22	104	34	10		16	119	17	1	65	3
4	2	25	340	22	2	132	5	2	482	11		38	4
120	1	186	79	206	44	13		116	17	4		6	5
		5	3	18	3	10	1		1	11		24	6
2	2	1	138	371	285	10			17	7		8	7
141	3	15	1	13	6	1		6		6	2	18	8
251	116	98	66	447	11	195	14	26	1,421	98	11	134	9
13	41	8	304	109	45	4		1	4	10		6	10
180	40	52	37	226	45	324	6	19	54	38	8	74	21
7		12	1	5	2	6	1	2	139	5	2	30	12
59	6	50	37	87	32	4	1	1	6	47	19	77	13
6	2	8	7	31	22	3	1		6	7		28	14
29	2	6	29	51	54	3		62	6	5		6	15
10	18	22	30	224	15	15			254	24	1	16	16
13	1	5	35	203	79	166	1	3	30	31	49	27	17
15	1	3	8	34	4	7				3		14	18
7	2	23	4	7					2	44	3	18	19
3	3	9	9	23	223	4		1	6	10	1	5	20
24	77	20	427	2,089	144	316	2	67	20	35	23	33	21
9	343	20	161	2,086	40	386	28	13	83	32	870	36	22
14		13	5	13	5	22		4		6	2	12	23
9	1	7	12	61	21	24		2	54	10		21	24
10	2	22	5	14	8	9		1	5	35	5	29	25
		2	4	6	1	8				3		4	26
17	16	18	270	1,510	67	1,502	82	140	286	15	223	35	27
59	1	31	57	274	37	133	3	281	56	19	5	34	28
4	1	38	15	12	5	21	14		3	19	1	18	29
6		26		3		3			1	12	1	18	30
12	15	82	967	937	29	4,801	36	5	523	89	802	63	31
10		58	20	7	15	70		3	246	26	3	31	32
13	3	49	9	38	17	33	2	4	52	23	7	33	33
37	2	16	7	23	33	10		1	4	31	7	19	34
1		9	9	234	37	291	2		111	11		18	35
2	14	8	64	627	59	332	9	6	98	4	33	1	36
1	4	66	2	19	9	19		1	2	33	42	10	37
18	8	28	26	46	24	25	1	4	195	33	21	55	38
3,227	12	24	8	55	8	29		1	1	24	6	50	39
11	8	8	20	115	19	67			20	2	1	6	40
14,140	37	236	136	1,355	470	193	17	190	1,282	93	65	170	41
		1	94	43		659			2	3	1	4	42
6	1	3	23	382	23	91		5	2	8	1	4	43
4	11	29	4	2	29	10		1		21		23	44
19	7	40	446	152	13			159	36	17		8	45
19	3	55	2	45	12	8			11	25	16	25	46
	1	11	3	35	67	2		3	2	4		8	47
2	1	8	19	104	9	249			13	1	1	4	48
2	12	8	39	115	37	136		1	27	11	44	8	49
25	228	25	2	11	6	10	1	10	48	75	7	21	50
19	10	18	676	1,631	767	62		48	1,689	22	3	40	51
		17	34		13	1			2			52	52
23	195	25	850	3,545	312	1,970	16	7	94	60	233	57	53
23	14	15	214	1,032	536	237	6	60	197	41	6	12	54
30	3	25	87	320	131	29	1	14	19	27	2	20	55
35	336	35	447	2,133	424	297	22	464	291	46	19	28	56

Table 18.—CONCLUDED.—Population of Michigan

Line number.	Counties.	General nativity.			Nationality of					
		Total.	Native-born.	Foreign-born.	Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
57	Midland	13,218	9,995	3,223	2,028	196	73	167	608	13
58	Missaukee	6,955	4,621	2,334	745	70	24	54	134	1
59	Monroe	33,181	28,870	4,311	610	293	58	242	2,857	13
60	Montcalm	34,158	28,743	5,415	2,007	505	58	215	892	2
61	Mtmorency	2,438	1,540	898	669	30	13	28	80	-----
62	Muskegon	37,324	25,442	11,882	2,443	482	164	497	1,876	25
63	Newaygo	19,125	15,823	3,302	1,102	197	53	142	488	33
64	Oakland	42,676	35,580	7,096	2,515	1,622	223	784	1,670	13
65	Oceana	16,599	14,019	2,580	862	185	40	78	555	5
66	Ogemaw	5,638	3,803	1,835	1,420	98	29	49	190	1
67	Ontonagon	6,873	4,172	2,701	1,070	125	29	177	310	19
68	Osceola	16,475	12,620	3,855	1,804	217	52	138	754	2
69	Oscoda	1,806	1,379	427	299	20	13	34	33	3
70	Otsego	4,794	3,329	1,465	590	85	31	47	250	6
71	Ottawa	39,063	27,766	11,317	822	367	122	310	1,562	23
72	Presque Isle	5,911	3,546	2,365	619	38	20	48	1,219	6
73	Roscommon	1,657	1,097	560	340	28	17	39	50	5
74	Saginaw	81,847	57,482	24,365	9,374	1,213	615	1,281	10,116	154
75	Sanilac	33,945	20,252	13,693	10,036	895	394	706	1,449	42
76	Schoolcraft	7,127	3,860	3,267	1,381	92	40	121	185	181
77	Shiawassee	32,854	28,249	4,605	2,011	687	113	430	1,145	10
78	St. Clair	54,321	35,709	18,612	11,282	1,347	593	1,328	3,555	37
79	St. Joseph	25,087	22,717	2,370	231	406	11	121	1,473	-----
80	Tuscola	34,412	26,011	8,401	5,873	653	193	350	1,136	18
81	Van Buren	31,059	28,860	2,199	638	502	59	297	476	1
82	Washtenaw	43,509	35,735	7,774	1,508	1,016	111	765	4,118	7
83	Wayne	292,461	182,452	110,009	29,261	8,276	2,920	8,006	47,375	981
84	Wexford	14,047	10,871	3,176	1,181	140	46	80	190	6

NATIVITY AND NATIONALITY OF POPULATION.

71

by general nativity and nationality, 1894.

foreign-born persons.

Hol- land.	Bel- gium.	Switzer- land.	Nor- way.	Sweden.	Den- mark.	Rus- sia.	Hun- gary.	Bo- hemia.	Po- land.	France.	Italy.	All oth- ers.	Line number.
778	3	8	4	21	22	25	25	3	5	5	1	16	57
4	36	5	31	308	41	130			5	7		6	58
42	1	49	2	2	8	1		31	9	54	2	42	59
	1	17	91	100	1,430	7		1	14	6	2	25	60
	1	2	14	22	19	8			2	1		9	61
2,657	5	29	873	2,170	438	117	4	12	23	35	2	30	62
521		15	60	396	181	88		1	3	13		19	63
19	15	64	7	8	33	17	2	8	33	32	4	27	64
307	44	3	140	189	144	5			1	13		9	65
1	1	5		8		10			12	5	6	5	66
3	9	12	52	291	18	505	2	4	50	13	4	8	67
70	1	54	16	712	9	7		2		8		9	68
1			1	8	1	4			5			5	69
5	11	4	1	45	38	38			306	3		5	70
7,712	4	29	65	169	45	14	2	2	16	21		32	71
	2	8	3	5	1	27		2	349	10	1	7	72
6	13	8	2	9	1	20			26	1			73
36	10	122	55	91	66	115	33	243	542	110	109	80	74
2	2	37	14	24	4	5		7	23	23	2	29	75
7	29	9	182	770	30	193	1	6	9	13	6	12	76
9	1	41	7	12	9	4	1	3	3	86	8	25	77
22	75	79	38	30	13	10		4	16	87	27	69	78
17	2	36	3	4	2	1			6	20	3	34	79
7	8	33	7	9	10	11	8	5	5	40		35	80
106		15	16	17	26	3			3	15	3	20	81
1	3	54	4	11	11	30		39	4	33	16	43	82
476	967	629	85	240	254	1,787	89	634	5,861	388	650	616	83
74	6	15	72	1,163	107	5			2	10		79	84

PART II.—BIRTHS IN MICHIGAN DURING THE YEAR 1894.

The total number of births registered in Michigan for the year 1894, including still-births, was 44,596. This number is less by 3,126 than the number returned for 1893, and it is the smallest number registered for any year since 1886. The birth-rate for the year is only 19.9 per 1,000 population, which is the lowest ever registered in this State without exception. In no previous year has the rate fallen below 21 per 1,000, with the single exception of 1881, in which year it was 20.5. The numbers recorded for each year of registration, together with the rates per 1,000 population, are given in Table 8, page 20.

This remarkable diminution in the births recorded in Michigan was by no means unexpected, but it has been predicted in these reports for some time as a natural consequence of the prevailing hard times, and the lessened number of marriages resulting therefrom. The high birth-rate of Michigan has been maintained chiefly by the high rates of childbearing of its foreign-born population, and it was upon this class of inhabitants that the pressure of unfavorable business conditions fell at first with the most crushing force. Examination of Table 15, showing the birth-rates by counties, and of Table 16, showing in which counties the chief falling off of the year occurred, in connection with Table 18, which exhibits the distribution of the population of the State by general nativity and nationality, will clearly point out this fact. Also it may be noted that of the 3,126 fewer births recorded for 1894 than for 1893, the diminution in the number of children born of parents both of foreign birth amounted to no less than 2,500, while of the children born of native parents, there were only 434 less. From this statement the number of children born of parents of different nativities is excluded, but would not materially affect the indications. The year 1893 showed a small increase, 1,501, over the births registered for 1892, but this increase was chiefly made up of the increase of the children of natives; the children born of parents both of foreign birth were only 20 more in 1893 than in 1892. Summing up, it appears that the pressure of hard times was first indicated in the great diminution of the births of children of foreign parents in 1893, and in the present year this pressure has continued, and impressed itself in addition upon the native birth-rate, to such an extent that the natural increase of population of the State has been very seriously affected.

In consulting Table 8, referred to above, for the purpose of comparing the births and birth-rates of previous years, it is necessary to use cautiously the statistics for the years 1887-91, inclusive. The rates for these years, as fully shown in the registration report for 1892, are vitiated by the addition of large numbers of fraudulent entries from the city of Detroit, so that no exact comparisons and statistical

conclusions are possible. Besides the irregularities in the returns of births in the years noted, it must be remembered that the returns of births in Michigan have always been very imperfect, even when honestly collected. In the reports of previous years it has been customary to make allowance for such deficiencies by adding a variable percentage of births as "corrections", for omissions in enumerating. Such "corrections" were merely estimations, and were objectionable from the fact that different amounts were added for each year, while there was no evidence to show that the accuracy of enumeration had varied. It has seemed preferable to submit the statement that the returns are known to be inaccurate, and that the addition of at least sixty per cent of the number returned would probably be well within the limits of the number that actually occurred. Such an approximation has no statistical value, and it is unnecessary to dwell upon it further than to say that we have no definite knowledge of the true number of births that occur annually in this State, and that all the data given in these reports relative to births are based upon returns very much less than the truth. It should not be too hastily inferred, however, that none of the conclusions drawn from these statistics is reliable, because for many purposes a representative, not an entirely complete registration fully suffices. Thus the relative proportions of each sex, nativity, etc., are undoubtedly correctly shown.

The birth-rates for individual counties are presented and discussed in Part I in connection with the returns of marriages and deaths (Table 15). In Table 16 comparisons are given for each county of the numbers returned for 1893 and 1894 of all classes of returns, and thus any marked increase or decrease may be readily noted. Reference should accordingly be made to these tables and the accompanying text for further information under these heads.

SUMMARY OF THE REGISTRATION OF BIRTHS FOR THE YEAR 1894.

The following statements include the more important features of the registration of births in Michigan for the year 1894:

Total number of births returned,	44,596
Birth-rate per 1,000 estimated population,	19.9

Exclusive of still-births, they were:

Children born alive,	43,594
Children born alive per 1,000 population,	19.4

Compared with the previous year, we have:

Decrease of births returned for 1894 (44,596) from the number returned for 1893 (47,722),	3,126
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The following is the distribution of births returned according to sex:

Males,	23,153
Females,	21,378
Sex unknown or unspecified (51 of these still-born),	65
Males born per 100 births of females,	108

The parent-nativity of children born in 1894, exclusive of births to parents of different nativities, may be stated:

Born of parents both of native birth,	19,182
Born of parents both of foreign birth,	15,864

Nationality is more definite than general nativity. It is given for the first time in this report. Following are certain nationalities most numerous represented as parents of children in Michigan:

Parents both Canadians,	8,294
Parents both Germans,	4,469
Parents both Hollanders,	1,011
Parents both Swedes,	1,076
Parents both Poles,	1,019

Classified by color, there were:

White,	44,252
Colored (black, 131; mulatto, 58; Indian, 110).	299
Color unknown or unspecified,	45

Of the 44,596 children born in 1894 according to the returns, there were:

Still-births (males, 549; females, 402; unknown, 51),	1,002
Still-birth-rate per 1,000 population,	.4
Still-births per 1,000 births,	22.5

Plural births are of special interest. Besides eight sets of triplets, there were reported:

Twin children (males, 448; females, 408),	856
---	-----

The reported rate of illegitimacy is low for Michigan. In 1894 there were returned:

Illegitimate births (males, 164; females, 188; unknown, 3),	855
Illegitimate births per 1,000 births,	8.0

The facts relating to the distribution of births in Michigan through the year, and also through the different counties of the State, together with comparisons with preceding years, are shown in the following tables. Analysis is made chiefly with reference to sex, color, nativity, and nationality of parents.

The arrangement of the tables contained in this portion of the Report is indicated in the following synopsis. First comes a discussion of the births returned for the year in their general relations, and inclusive of all classes, still-births, plural births, and illegitimate births. Following this, the classes of births of special interest, namely, the still-births, twins and illegitimates, are presented. In the present Report a special effort has been made to present the important statistical relations of births and marriages, as registered in the State for the previous years. Two ratios are chiefly important for this purpose, (1) that expressing the fecundity of marriage, or the annual births per marriage solemnized; and (2) the fertility of the child-bearing women of the State, as indicated by the rate of births to females aged 15 to 44. The important and suggestive differences in the rates of child-bearing of our native-born and foreign-born inhabitants are distinctly brought out in the course of this discussion.

Synopsis of tables relating to births.

Table.	Births in Michigan, 1894.
<i>A.—General discussion of births.</i>	
19.	Births, by months, for each of the years 1885-94, with average for the ten-year period.
20.	Comparison, by months, of the enumerations of births by the State census and State registration system for the census year, 1893-94.
21.	Births, by sex and months, in each county of the State in 1894; also number of births of males to 100 births of females for each county. With NOTE on color of children born in Michigan, 1894.
22.	By parent-nativity and sex, the number and per cent of children born in Michigan, 1894.
23.	Parent-nativity of children born in Michigan during the years 1885-94, with average for the ten-year period.
24.	Comparison of parent-nativity of children born in Michigan during the years 1891-94, with averages for the four preceding quinquennial periods.
25.	Births, by parent-nativity and sex, for each county of the State in 1894.
26.	Nationality of parents of children born in Michigan during the year 1894.
27.	Ratios of parents of children, by nationality, to corresponding population of Michigan, 1894.
28.	Nationality of parents of children by counties, 1894.
<i>B.—Still-births, plural and illegitimate births.</i>	
29.	Number of still-births, pairs of twins and illegitimate children born in each county of the State in 1894.
30.	Ratios of still-born, twin and illegitimate children to total births for ten years, 1885-94. Statement of triplets.
31.	Months of birth, by sex, of still-born, twin and illegitimate children, 1894.
32.	Parent-nativity, by sex, of still-born, twin and illegitimate children, 1894.
33.	Ratios of the sexes (number of males to 100 females) of children born alive, still-births, twins and illegitimates for ten years, 1885-94.
34.	Comparison of the parent-nativity of plural births in Michigan for ten years, 1885-94.
35.	Comparison of the parent-nativities of the mothers of illegitimate children born in Michigan for ten years, 1885-94.
<i>Fecundity of marriages by nativity and nationality.</i>	
36.	Comparative fecundity and frequency of marriages of native-born and foreign-born women of child-bearing age during the years 1870-94.
37.	Fertility, fecundity and frequency of marriage by five-year periods, with corrections for imperfect returns.
38.	True fecundity of marriage in Michigan by nativity, by five-year periods.
39.	Comparison of the number of children born in Michigan in 1894 of parents of given nationality with the number of marriages registered of corresponding nationality.
40.	List of townships reporting that no births occurred in 1894.
41.	List of townships that failed to make returns of births for 1894.

BIRTHS AS RETURNED BY MONTHS.

Table 19 displays the numbers of births returned for each month of the year 1894, and enables comparisons to be made with each of the previous years since 1885, and also with the average for the ten-year period, 1885-94. In 1894 the largest number of births occurred in December, the smallest number in January. August showed the largest number for the decennial period, and January the smallest. The returns for the different months do not at all represent the true relations of the births that actually occurred in those periods of time. It is well known that, by the present system of registration in this State a large number of births entirely fall of record

each year. The largest amount of deficiency in this respect is found among the first months of the year, these months being most remote from the date of registration. The returns for December and the latter months of the year are much more perfect, though even with these at least four months elapse between the occurrence of the births and the time of recording them. For this reason it will be observed that if the same number of births actually occurred in each month of the year, the order of the months, *as returned*, would be in the reverse order of their procession in the year. That the latter months of the year predominate in the years compared and also in the ten-year average, does not appear especially significant in view of the large margin of error involved in the data presented.

Table 19.—Births returned, by months, for the years 1885-94 inclusive; with average for the ten-year period. (Still-births included.)

Years.	Total for year.	Months.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
1885.....	42,119	2,707	2,987	3,533	3,618	3,730	3,346	3,567	3,924	3,995	3,624	3,363	3,689	36
1886.....	41,006	2,617	2,858	3,456	3,640	3,498	3,352	3,598	3,781	3,707	3,540	3,270	3,727	51
1887.....	46,226	3,182	3,150	3,987	3,896	3,960	3,666	4,011	4,295	4,331	3,944	3,765	4,058	60
1888.....	48,952	3,531	3,516	4,099	3,953	4,214	4,133	4,223	4,514	4,415	4,305	3,811	4,193	45
1889.....	49,272	3,340	3,104	4,001	4,057	4,238	4,050	4,252	4,526	4,382	4,292	4,331	4,646	53
1890.....	52,306	4,130	3,718	4,356	4,407	4,568	4,313	4,397	4,651	4,517	4,219	4,223	4,765	42
1891.....	50,812	3,629	3,534	4,345	4,238	4,465	4,078	4,293	4,702	4,646	4,340	4,098	4,391	53
1892.....	46,221	3,226	3,315	3,745	3,928	3,977	3,681	3,929	4,168	4,068	3,918	3,853	4,344	49
1893.....	47,722	3,346	3,391	4,069	3,934	3,924	3,901	4,158	4,351	4,246	4,165	3,916	4,263	58
1894.....	44,596	2,899	3,020	3,854	3,896	3,866	3,735	3,917	3,981	3,778	3,750	3,684	4,204	22
Average, 1885-94.	46,932	3,255	3,259	3,945	3,957	4,044	3,826	4,035	4,286	4,211	4,010	3,831	4,228	47

Maxima in bold-faced type; minima in *italics*.

CENSUS AND REGISTRATION RETURNS OF BIRTHS BY MONTHS.

The statements in regard to the imperfection of the returns of births under the present system of registration are not mere matters of conjecture, but are demonstrated as absolute facts by the results of the various census enumerations of births. Taking the last State census, 1894, which collected the births that occurred in the State for the census year extending from June, 1893, to May, 1894, both inclusive, and comparing the results with the births enumerated by the State registration for the same months, we have the relations exhibited in Table 20. It is there seen (1) that the census enumerated 13,298 more births than the registration for the same period of time; (2) the average interval before enumeration in the case of the census was 6.5 months, and in the case of the State registration was 10.5 months, thus giving an average advantage to the census of 4 months; (3) this difference was not evenly distributed over the census year, for the first seven months are enumerated each one month later than the registration, while the last five months are enumerated eleven months earlier; (4) the census is somewhat more accurate than the registration, without regard to lapse of time, for in six of the seven months in which the advantage of time lies on the side of the registration, the census records the greater

number of births, and would undoubtedly do so for June except for the tendency to report children nearly one year of age as quite so, and thus exclude them from the number born during the census year; (5) neither the census nor the registration supply accurate data in regard to the distribution of births by months, both showing a falling off in the months more remote from registration; (6) while a general diminution in the accuracy of registration occurs proportionately to the interval between occurrence and registration, such diminution is not sufficiently regular to serve as a basis for estimating the actual occurrence of births in the different months from the numbers returned.

Almost precisely similar relations appeared in comparisons made between the census of 1870 and the registration returns for the census year, and between the census and registration of 1884.* These years, 1870, 1884 and 1894 are the only ones for which such comparisons can be made, no compilation of vital statistics by months having been made for the other censuses taken.

It may be of interest to employ the method used in the Statistics of Michigan, 1870, and which so long served as the basis of the "corrections" of births in these reports, using the figures given in Table 20. We observe that the census returned 4,666 births for December, 1893, and 4,864 for January, 1894. Only a difference of one month exists between the intervals before enumeration. According to the registration returns, however, there were 4,263 births in December, and only 2,889 in January. The latter month was eleven months more remote from the date of enumeration than the former. If, therefore, we assume, the births of January had been enumerated only one month more tardily than those of December, the relation between them would have been the same as that shown by the census. We should have:—

CENSUS.		REGISTRATION.	
December, 1893.	January, 1894.	December, 1893.	January, 1894.
4,666	4,864.	4,263	x = 4,444.

That is to say, had the births been registered in May, 1894, four months after their occurrence, instead of in May, 1895, sixteen months after their occurrence, there would have been 4,444 recorded instead of only 2,889. The difference, 1,555, represents the number of births that a year's lapse of time has caused to be omitted; it is 53.8 per cent of the number returned for the month. It is the per cent by which the registration statement of births for May should be increased to cause them to equal the probable number of births that actually occurred. Assuming that accuracy of registration varies directly with nearness to time of registration, the per cent by which the next month, June, should be increased would be eleven-twelfths of 53.8 per cent, or 49.3 per cent, July by ten-twelfths, August by nine-twelfths, etc. The months of the registration year more remote from the date of enumeration would be increased by thirteen-twelfths of 53.8 per cent for April up to sixteen-twelfths of 53.8 per cent for January, or 71.7 per cent. Applying this method of correction month by month, it is found that the total number of births registered for 1894 as given in this report would be increased by 20,522, or 46.0 per cent of the number returned. This addition would indicate that the number of births that actually occurred during the calendar year 1894 was 65,119, corresponding to a birth-rate of 29.0 per 1,000 population.

The above estimate is given as throwing some light upon the probable amount of deficiency of the returns of births by the registration, but, like all estimates, is not regarded as of sufficient reliability to base important deductions upon. For this reason the estimated numbers of births by months are not given.

* Statistics of Michigan, 1870. Table 1, p. lxix: Census of Michigan, 1884. Vol. 1, p. cxlii.

VITAL STATISTICS OF MICHIGAN, 1894.

Table 20.—Comparison, by months, of the births enumerated by the State census and State registration for the census year, June, 1893-May, 1894, inclusive; showing the lapse of time before registration in each case. (Still-births included.)

Character and time of enumeration of births.	Total for year, 1893-94.	Births by months, June, 1893-May, 1894.											
		1893.						1894.					
		June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.
<i>Time elapsed before enumeration—months.....</i>	6.5	12	11	10	9	8	7	6	5	4	3	2	1
State census enumeration, June, 1894*.....	59,823	3,781	4,903	5,228	5,228	4,791	4,542	4,668	4,864	5,004	5,894	5,621	5,323
<i>Time elapsed before enumeration—months.....</i>	10.5	11	10	9	8	7	6	5	-----	-----	-----	-----	-----
State registration, May, 1894*.....	46,525	3,901	4,158	4,351	4,246	4,165	3,916	4,263	-----	-----	-----	-----	-----
<i>Time elapsed before enumeration—months.....</i>	-----	-----	-----	-----	-----	-----	-----	-----	16	15	14	13	12
State registration, May, 1893*.....	-----	-----	-----	-----	-----	-----	-----	-----	2,889	3,020	3,854	3,886	3,866
<i>Excess of time in favor of census—months.....</i>	4	-1	-1	-1	-1	-1	-1	-1	11	11	11	11	11
Excess of births enumerated in favor of census†.....	13,288	-140	745	877	980	626	626	403	1,975	1,984	2,040	1,725	1,457
Per cent by which registration returns require to be increased to equal census returns.....	28.6	-3.6	17.9	20.2	23.1	15.0	16.0	9.5	68.4	65.7	52.9	44.3	37.7

* Unknown month excluded.

† Excess of time or births in favor of the State registration system is indicated by the minus sign (-).

BIRTHS BY COUNTIES, MONTHS AND SEX.

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Table 21.—*Exhibiting, by counties and by sex, the number of births returned for the year, and for each month of the year 1894; also the number of males to 100 females. With note on color of children born. (Still-births included.)*

State and counties.	Births — males to 100 females.	Sex.	Year, 1894.	Months, 1894.												
				January.	February.	March.	April.	May.	June.	July.	August.	Septem ^r .	October.	November.	December.	Unknown.
State.....	108	{ Total..... Males..... Females..... Unknown.....	44,596 23,153 21,378 65	2889 1512 1370 7	3020 1555 1429 6	3854 2043 1806 5	3896 2026 1867 3	3866 2010 1850 6	3735 1942 1788 5	3917 2016 1895 6	3981 2021 1955 5	3778 1944 1829 5	3750 1939 1807 4	3684 1905 1777 2	4204 2199 1996 9	22 11 9 2
Alcona.....	108	{ Total..... Males..... Females.....	125 65 60	2 1 1	5 2 3	12 8 4	11 4 7	8 7 1	17 10 7	10 5 6	8 4 3	19 7 12	7 3 4	11 6 5	15 8 7	-----
Alger.....	44	{ Total..... Males..... Females.....	26 8 18	2 1 1	-----	1 -----	1 1	1 1	3 3	-----	3 1 2	3 1 2	3 1 2	7 1 6	2 2 -----	-----
Allegan.....	111	{ Total..... Males..... Females.....	714 375 339	44 30 14	39 13 26	61 41 20	68 28 40	62 31 26	64 35 33	65 32 30	59 26 37	67 33 31	62 24 24	64 27 31	59 28 31	-----
Alpena.....	116	{ Total..... Males..... Females.....	482 259 223	36 21 15	39 19 20	46 19 27	51 28 23	24 23 12	38 22 15	48 23 25	42 18 24	32 19 13	28 16 6	33 22 15	65 37 28	-----
Antrim.....	112	{ Total..... Males..... Females.....	208 110 98	17 7 10	12 4 8	19 11 8	22 11 11	18 13 5	15 5 10	21 15 6	13 7 6	18 9 9	20 10 10	16 6 9	17 8 -----	-----
Arenac.....	81	{ Total..... Males..... Females.....	134 60 74	6 3 3	10 7 3	10 4 6	13 6 7	16 11 13	20 9 9	15 11 6	15 6 9	7 5 2	6 1 5	5 2 3	11 3 8	-----
Baraga.....	72	{ Total..... Males..... Females.....	110 46 64	11 3 8	4 1 3	11 7 4	12 5 7	3 3 -----	14 7 7	10 6 4	12 5 7	12 2 10	6 1 5	9 5 4	6 1 5	-----
Barry.....	123	{ Total..... Males..... Females.....	382 211 171	20 9 11	19 11 8	30 19 11	49 19 30	32 16 16	36 22 14	29 18 11	32 21 11	29 17 12	37 20 17	34 19 15	35 20 15	-----
Bay.....	110	{ Total..... Males..... Females..... Unknown.....	1,505 788 715 2	94 48 48 1	106 54 52	154 90 64	120 56 64	121 68 53	106 57 49	137 68 68	156 76 80	119 69 50	113 53 60	122 70 52	153 79 74	1 -----
Benzie.....	98	{ Total..... Males..... Females.....	164 81 83	7 3 4	6 3 3	9 4 5	17 8 9	10 4 6	19 12 7	15 9 6	20 10 10	18 5 13	12 4 8	10 7 3	21 12 9	-----
Berrien.....	116	{ Total..... Males..... Females..... Unknown.....	681 365 315 1	45 25 20	47 25 22	46 23 23	54 28 26	60 35 32	67 30 32	48 30 18	62 30 32	70 37 33	61 32 29	58 27 31	63 38 25	-----
Branch.....	126	{ Total..... Males..... Females.....	378 211 167	25 11 14	20 8 12	34 23 11	31 17 14	36 23 24	33 19 10	40 23 11	33 19 14	36 16 17	26 14 10	29 15 15	35 20 -----	-----
Calhoun.....	96	{ Total..... Males..... Females..... Unknown.....	676 328 341 7	43 22 21	37 19 17	53 20 31	54 24 30	62 27 27	46 21 18	48 29 27	78 31 39	61 27 33	73 33 33	51 26 26	69 30 39	1 1
Cass.....	117	{ Total..... Males..... Females.....	280 140 120	19 12 7	15 6 9	19 10 9	27 16 11	19 17 12	22 14 8	21 15 6	22 12 10	29 17 12	20 6 14	24 12 12	23 13 10	-----
Charlevoix.....	108	{ Total..... Males..... Females.....	175 91 84	8 8 3	6 3 13	21 8 13	14 6 8	16 10 6	19 8 11	14 9 5	16 8 8	22 11 11	18 6 10	12 6 6	9 6 3	-----
Cheboygan.....	116	{ Total..... Males..... Females.....	354 190 164	24 15 9	29 17 12	26 15 11	26 13 13	38 21 17	41 20 21	23 13 21	35 17 18	29 14 15	32 15 17	21 12 9	30 18 12	-----

Table 21.—CONTINUED.—*Births by counties, months and sex.*

Counties.	Births — males to 100 females.	Sex.	Year, 1894.	Months, 1894.											
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December. Unknown.
Chippewa.....	101	Total.....	324	21	29	30	32	28	25	27	27	25	27	16	37
		Males.....	160	11	14	12	16	11	14	13	14	17	13	6	19
		Females.....	159	10	15	18	16	17	10	13	13	8	14	9	16
		Unknown.....	5						1	1				2	
Clare.....	106	Total.....	161	13	7	11	12	20	12	18	13	22	14	10	9
		Males.....	83	7	2	5	6	12	7	9	8	9	7	5	6
		Females.....	78	6	5	6	6	8	5	9	5	13	7	5	3
		Unknown.....													
Clinton.....	100	Total.....	387	20	28	33	31	33	26	34	25	50	35	34	37
		Males.....	193	14	17	16	19	12	15	15	10	27	13	18	17
		Females.....	193	6	11	17	12	21	11	19	15	23	22	16	20
		Unknown.....	1												1
Crawford.....	168	Total.....	51	4	3	2	7	5	4	6	4	4	4	4	3
		Males.....	32	3	2	2	3	2	2	4	4	2	2	3	2
		Females.....	19	1	1		4	3	2	2		2	2	1	1
		Unknown.....													
Delta.....	123	Total.....	426	19	25	37	40	34	38	43	46	35	29	38	42
		Males.....	235	11	18	19	17	23	21	23	22	21	14	27	19
		Females.....	191	8	7	18	23	11	17	20	24	14	15	11	23
		Unknown.....													
Dickinson.....	104	Total.....	648	48	53	56	78	51	65	41	56	53	51	36	60
		Males.....	331	22	28	32	42	23	35	22	28	28	25	15	31
		Females.....	317	26	25	24	36	28	30	19	28	25	26	21	29
		Unknown.....													
Eaton.....	111	Total.....	469	28	38	39	34	43	43	48	33	45	39	21	58
		Males.....	247	16	22	25	16	22	20	26	16	24	25	9	26
		Females.....	222	12	16	14	18	21	23	22	17	21	14	12	32
		Unknown.....													
Emmet.....	103	Total.....	177	11	10	10	22	16	21	16	10	18	11	12	20
		Males.....	90	5	4	5	10	9	13	9	4	10	5	5	11
		Females.....	87	6	6	5	12	7	8	7	6	8	6	7	9
		Unknown.....													
Genesee.....	103	Total.....	592	32	41	66	47	54	45	49	54	46	50	54	54
		Males.....	300	16	20	28	26	25	27	29	23	30	21	28	28
		Females.....	292	16	21	38	21	29	18	22	25	23	20	33	26
		Unknown.....													
Gladwin.....	158	Total.....	49	4	1		5	6	4	6	10	2	3	6	2
		Males.....	30	2			4	4	4	6	1	1		5	
		Females.....	19	2	1		1	2		2	4	1	3	1	2
		Unknown.....													
Gogebic.....	118	Total.....	552	43	34	69	42	46	40	47	44	44	48	38	56
		Males.....	299	27	10	42	29	26	27	23	17	28	21	21	27
		Females.....	253	16	24	27	13	20	13	24	27	16	27	17	29
		Unknown.....													
Gd. Traverse.....	101	Total.....	310	15	13	29	32	33	26	28	29	26	22	23	33
		Males.....	156	10	6	14	20	19	12	11	15	12	11	9	17
		Females.....	154	5	7	15	12	14	14	17	14	14	11	14	16
		Unknown.....													1
Gratiot.....	88	Total.....	458	23	25	36	45	41	45	53	39	42	37	35	37
		Males.....	215	12	15	22	20	15	23	27	12	22	16	10	21
		Females.....	243	11	10	14	25	26	22	26	27	20	21	25	16
		Unknown.....													
Hillsdale.....	125	Total.....	344	27	19	36	38	22	32	24	34	26	32	28	25
		Males.....	190	10	6	18	25	13	22	10	20	13	20	19	14
		Females.....	152	17	12	18	13	9	10	14	14	13	12	9	11
		Unknown.....	2		1										1
Houghton.....	112	Total.....	1,816	153	134	163	137	159	139	146	146	169	161	137	170
		Males.....	956	82	77	80	85	90	73	72	76	86	86	63	85
		Females.....	851	69	56	83	51	69	65	73	68	83	75	74	84
		Unknown.....	9	2	1		1	1	1	2					1
Huron.....	106	Total.....	870	69	78	63	87	80	73	69	87	55	71	64	74
		Males.....	447	26	34	37	61	36	36	37	45	26	40	34	35
		Females.....	423	43	44	26	26	44	37	32	42	29	31	30	39
		Unknown.....													
Ingham.....	118	Total.....	582	31	31	55	46	61	42	52	69	51	53	49	42
		Males.....	315	18	22	33	24	29	25	31	33	27	27	24	22
		Females.....	266	12	9	22	22	32	17	21	36	24	26	25	20
		Unknown.....	1												

BIRTHS BY COUNTIES, MONTHS AND SEX.

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Table 21.—CONTINUED.—*Births by counties, months and sex.*

Counties.	Births — males to 100 females	Sex.	Year, 1894.	Months, 1894.												
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
Ionia.....	124	{ Total..... Males..... Females..... Unknown.....	454 251 148 1	33 16 17 —	43 26 17 —	42 24 18 —	38 17 20 1	45 29 16 —	26 10 16 —	39 20 19 —	39 21 18 —	39 27 12 —	36 20 16 —	34 20 14 —	38 20 18 —	2 1 —
Iosco.....	112	{ Total..... Males..... Females..... Unknown.....	281 148 132 1	21 12 9 —	21 12 9 —	22 12 10 —	28 18 15 —	27 15 15 —	30 12 15 —	27 15 17 —	28 9 18 1	19 14 5 —	20 13 13 —	13 7 8 —	25 16 9 —	— — — —
Iron.....	100	{ Total..... Males..... Females.....	128 64 64	8 4 4	5 3 2	12 5 7	14 4 10	11 6 5	5 3 2	11 5 6	9 6 3	15 10 5	9 3 6	13 7 6	16 8 8	— — —
Isabella.....	113	{ Total..... Males..... Females.....	476 253 223	15 11 4	31 20 11	47 25 22	40 19 21	47 26 21	51 35 16	46 21 25	42 19 23	54 26 28	26 13 13	46 13 20	31 26 19	— — —
Jackson.....	93	{ Total..... Males..... Females.....	781 377 404	47 24 23	51 30 21	88 38 50	72 36 36	65 33 32	69 34 35	70 29 41	71 34 37	59 30 29	63 26 37	66 32 34	60 31 29	— — —
Kalamazoo.....	103	{ Total..... Males..... Females..... Unknown.....	697 353 343 1	44 24 20 —	59 33 26 —	52 24 28 —	37 16 21 —	48 25 23 —	55 37 28 —	59 27 27 —	61 32 35 1	69 25 32 —	80 43 37 —	61 30 31 —	72 37 35 —	— — — —
Kalkaska.....	107	{ Total..... Males..... Females.....	87 45 42	6 2 4	4 2 2	4 2 2	6 3 3	12 8 4	13 5 8	4 2 2	11 8 3	7 4 4	7 6 1	7 2 5	6 2 4	— — —
Kent.....	109	{ Total..... Males..... Females..... Unknown.....	2,585 1,345 1,236 4	168 93 75 —	186 98 87 1	220 111 109 —	226 126 100 —	218 115 102 1	209 106 100 1	202 108 94 —	229 122 107 —	221 116 105 —	213 105 108 —	237 121 116 1	256 124 131 —	— — — —
Keweenaw.....	75	{ Total..... Males..... Females.....	91 39 52	7 3 4	7 3 4	7 4 3	12 5 8	5 3 2	7 4 3	11 6 5	8 4 6	7 2 3	7 2 5	8 2 6	5 2 3	— — —
Lake.....	93	{ Total..... Males..... Females.....	118 57 61	7 5 2	8 3 5	12 5 7	8 4 4	10 5 6	11 5 6	8 3 5	11 8 3	9 2 7	12 7 5	9 4 5	13 7 6	— — —
Lapeer.....	98	{ Total..... Males..... Females.....	401 198 203	22 11 11	25 13 12	37 17 20	38 21 17	38 20 18	33 13 20	37 13 20	34 13 20	30 12 17	35 16 22	34 12 15	34 17 17	— — —
Leelanau.....	117	{ Total..... Males..... Females.....	243 131 112	7 2 5	13 5 8	17 8 9	22 14 8	26 14 12	31 18 19	24 13 11	25 18 7	18 9 9	19 5 5	14 11 4	11 15 15	— — —
Lenawee.....	97	{ Total..... Males..... Females.....	633 312 321	38 12 26	42 18 24	58 30 24	63 26 33	48 30 22	56 26 26	58 31 27	59 31 28	54 26 28	56 24 24	54 27 27	47 19 28	— — —
Livingston.....	108	{ Total..... Males..... Females.....	312 162 150	15 8 7	22 8 14	22 14 8	30 18 12	35 15 20	33 19 14	29 13 16	22 9 13	21 11 10	29 15 14	28 16 12	26 16 10	— — —
Luce.....	207	{ Total..... Males..... Females..... Unknown.....	47 31 15 1	2 2 — —	— — — —	3 — 3 —	5 4 1 —	6 3 2 —	7 5 1 —	— 5 2 —	— 5 2 —	— 5 2 —	5 3 2 1	5 4 1 —	4 2 1 —	— — — —
Mackinac.....	90	{ Total..... Males..... Females.....	182 86 96	6 5 1	17 11 6	10 6 7	20 9 11	18 11 7	15 3 12	27 12 15	20 8 12	12 7 5	15 5 9	15 10 5	7 1 6	— — —
Macomb.....	107	{ Total..... Males..... Females..... Unknown.....	590 305 284 1	34 20 14 —	35 22 13 —	61 35 26 —	53 30 23 —	56 26 18 1	34 16 25 —	61 36 18 —	45 21 25 —	57 31 26 —	56 31 25 —	48 20 28 —	50 17 33 —	— — — —

Table 21.—CONTINUED.—*Births by counties, months and sex.*

Counties.	Births—males to 100 females.	Sex.	Year, 1894.	Months, 1894.									
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.
Manistee.....	103	Total.....	790	54	48	70	67	82	76	66	66	45	67
		Males.....	400	28	25	42	37	37	39	30	32	25	31
		Females.....	390	26	23	28	30	45	37	36	34	20	36
Manitou.....	114	Total.....	15	3	1	2	1	2	2	1	1	1	2
		Males.....	8	1	1	2	1	1	1	1	1	1	1
		Females.....	7	1	1	2	1	1	1	1	1	1	1
Marquette.....	109	Total.....	1,071	105	76	89	93	95	90	97	84	81	83
		Males.....	559	58	40	49	45	51	43	45	48	43	39
		Females.....	512	47	36	40	48	44	47	52	36	38	44
Mason.....	96	Total.....	448	23	34	40	35	51	38	29	42	34	43
		Males.....	220	11	18	21	20	28	19	11	26	8	21
		Females.....	228	12	16	19	15	23	19	18	16	26	22
Mecosta.....	94	Total.....	370	16	16	26	41	36	26	42	40	33	23
		Males.....	178	10	10	16	21	11	16	22	18	14	9
		Females.....	190	6	6	10	20	24	10	20	22	18	14
		Unknown.....	2					1				1	
Menominee.....	113	Total.....	695	69	79	65	43	55	70	64	45	38	47
		Males.....	367	35	36	39	20	25	35	35	27	18	26
		Females.....	325	34	43	26	23	30	35	29	18	18	21
		Unknown.....	3									2	1
Midland.....	115	Total.....	265	12	19	18	19	32	21	23	26	30	19
		Males.....	142	6	10	11	8	17	10	11	10	14	12
		Females.....	123	6	9	7	11	15	11	12	16	16	7
Missaukee.....	76	Total.....	168	10	12	7	11	11	13	22	17	17	11
		Males.....	71	5	4	3	6	8	6	9	4	10	2
		Females.....	94	5	8	4	5	3	7	12	13	7	9
		Unknown.....	3							1			
Monroe.....	109	Total.....	603	29	33	50	49	54	51	41	55	58	56
		Males.....	314	20	14	24	21	28	31	23	25	30	31
		Females.....	289	9	19	26	28	26	20	18	30	28	25
Montcalm.....	109	Total.....	545	26	32	50	55	48	42	63	56	50	40
		Males.....	284	14	17	24	29	25	23	37	22	27	18
		Females.....	260	12	15	26	26	23	19	26	34	23	21
		Unknown.....	1										1
Montmorency.....	115	Total.....	58	3	6	4	7	4	3	8	8	3	5
		Males.....	31	2	5	3	3	3	2	2	6	1	1
		Females.....	27	1	1	1	4	1	1	6	2	3	4
Muskegon.....	107	Total.....	770	59	59	65	67	71	60	58	62	64	66
		Males.....	397	28	33	35	39	36	23	32	31	28	35
		Females.....	372	30	26	30	28	35	37	26	31	36	31
		Unknown.....	1	1									
Newaygo.....	101	Total.....	331	19	24	33	30	30	29	26	39	26	17
		Males.....	166	9	8	14	11	16	16	16	17	15	9
		Females.....	165	10	16	19	19	14	13	10	22	11	8
Oakland.....	114	Total.....	522	35	25	50	41	57	39	42	44	48	36
		Males.....	278	19	13	32	27	31	19	25	22	22	16
		Females.....	244	16	12	18	14	26	20	17	22	26	20
Oceana.....	128	Total.....	265	12	19	24	16	24	26	31	33	23	21
		Males.....	149	7	11	13	9	12	13	18	18	14	11
		Females.....	116	5	8	11	7	12	13	13	15	9	10
Ogemaw.....	112	Total.....	55	7	4	2	3	8		6	6	4	2
		Males.....	29	4	1	2		4		4	4	3	1
		Females.....	26	3	3		3	4		2	2	1	1
Ontonagon.....	108	Total.....	79	7	4	3	8	13	6	12	8	6	5
		Males.....	40	3	3	2	5	4	3	5	6	3	2
		Females.....	37	4	1	1	3	9	2	6	2	3	2
		Unknown.....	2						1	1			

Table 21.—CONCLUDED.—Births by counties, months and sex.

Counties.	Births—males to 100 females.	Sex.	Year, 1894.	Months, 1894.											
				January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December. Unknown.
Osceola.....	125	{ Total..... Males..... Females.....	371 206 165	23 13 10	18 9 9	29 20 9	34 18 16	56 29 27	37 19 18	33 17 16	24 20 10	35 16 15	33 14 17	25 14 11	24 17 7
Oscoda.....	210	{ Total..... Males..... Females.....	31 21 10	1 1 1	2 1 1	3 2 1	1 1 1	5 4 1	2 4 1	3 3 1	4 2 2	3 1 2	2 1 1	2 1 1	-----
Otsego.....	130	{ Total..... Males..... Females.....	99 56 43	2 1 1	13 8 5	4 3 1	6 3 3	8 4 4	9 5 4	15 8 7	7 4 3	7 5 2	10 6 4	12 5 7	6 4 2
Ottawa.....	106	{ Total..... Males..... Females.....	792 408 384	48 18 30	59 31 28	52 32 20	81 39 42	68 31 37	76 29 36	69 43 40	73 34 30	60 37 26	74 34 37	64 34 30	67 39 28
Presque Isle.....	148	{ Total..... Males..... Females.....	171 102 69	19 12 7	8 6 2	17 11 6	20 13 7	7 6 1	9 3 6	21 13 8	10 6 4	14 5 9	15 6 9	17 11 6	14 10 4
Roscommon.....	94	{ Total..... Males..... Females.....	31 15 16	1 1 1	3 2 1	----- ----- -----	4 1 4	3 2 2	4 1 4	2 3 -----	1 3 -----	4 3 1	5 3 2	2 2 2	2 2 -----
Saginaw.....	99	{ Total..... Males..... Females..... Unknown..	1,866 927 935 4	115 62 51 2	132 63 69	167 81 86	177 80 96	164 87 77	167 84 83	155 77 78	147 68 79	156 88 90	170 89 80	159 82 77	157 88 69
Sanilac.....	124	{ Total..... Males..... Females.....	694 384 310	37 22 15	44 21 23	71 44 27	63 36 27	47 29 18	62 28 34	58 35 23	72 38 34	51 27 24	56 32 24	67 39 28	65 33 32
Schoolcraft.....	109	{ Total..... Males..... Females.....	194 101 93	12 5 7	7 4 3	18 5 13	17 5 12	16 13 9	21 12 11	19 12 10	22 7 3	10 12 6	13 7 10	20 10 12	18 12 6
Shiawassee.....	120	{ Total..... Males..... Females..... Unknown..	433 235 196 2	19 11 8	31 20 11	24 13 11	34 20 14	38 20 18	41 19 22	40 18 22	37 20 16	42 25 17	51 26 25	38 20 18	36 22 13
St. Clair.....	104	{ Total..... Males..... Females.....	997 509 488	61 33 28	55 31 24	92 41 51	95 47 48	93 44 49	69 37 32	105 52 53	80 44 36	78 40 38	92 53 39	78 32 46	99 55 44
St. Joseph.....	112	{ Total..... Males..... Females.....	297 157 140	15 8 7	21 11 10	25 19 6	32 11 17	28 11 17	27 13 14	26 15 10	23 15 8	25 15 10	19 7 12	30 11 19	26 16 10
Tuscola.....	114	{ Total..... Males..... Females.....	489 261 228	25 11 14	28 16 12	33 16 17	45 22 23	60 36 24	41 24 17	54 37 26	38 24 20	46 26 20	44 21 23	37 26 23	38 20 18
Van Buren.....	118	{ Total..... Males..... Females.....	487 264 223	27 14 13	25 14 11	28 13 15	49 30 19	38 22 16	38 20 18	42 19 23	47 23 26	48 23 25	53 30 23	41 24 17	51 34 17
Washtenaw.....	127	{ Total..... Males..... Females..... Unknown..	716 399 313 4	53 23 30	45 27 18	79 43 34	58 31 27	49 30 19	70 44 26	38 23 15	59 33 26	73 42 31	62 32 30	69 34 35	60 36 22
Wayne.....	107	{ Total..... Males..... Females..... Unknown..	6,876 3,554 3,316 6	468 239 229	488 262 224	582 301 280	549 288 261	514 264 249	510 247 263	612 305 306	633 337 296	560 281 278	593 319 302	645 343 356	719 366 353
Wexford.....	105	{ Total..... Males..... Females.....	306 157 149	30 15 15	16 13 3	32 19 13	27 12 15	28 16 13	27 16 12	24 11 15	22 11 13	20 9 11	22 9 12	23 11 12	29 15 14

NOTE TO TABLE 21.—COLOR OF CHILDREN BORN IN MICHIGAN, 1894.

Out of 44,596 births, the total number reported for the year, 44,252 were white. Only 344 children were given as belonging to other colors or races, of whom 131 were black, 58 mulatto and 110 Indian (including 8 halfbreeds). There were 45 of unspecified color. The proportion of white children is so large, constituting 99.23 per cent of the total births, that any deductions in regard to comparative birth-rates in the white and colored population of this State must, necessarily, be of very slight importance and of very doubtful value. Below are given, with specification of sex, the number of births of colors other than white in each county of the State:

BLACK BIRTHS.—Total for State, 131; 61 males and 2 of unknown sex. By counties.—Wayne, 26 males, 20 females, 1 unknown sex; Washtenaw, 4 males, 7 females; Lenawee, 5 males, 5 females; Ingham, 4 males, 5 females; Jackson, Kalamazoo, each 3 males, 4 females; Calhoun, 3 males, 3 females; Cass, 2 males, 2 females; Oakland, 2 males, 1 female; Kent, 1 male, 3 females; Allegan, Isabella, each 1 male, 2 females; Genesee, 2 males; St. Joseph, 1 male, 1 female; Berrien, Charlevoix, Osceola, each 1 male; Gratiot, Houghton, Ionia, Mecosta, Monroe, Montcalm, Ottawa, St. Clair and Van Buren, each 1 female; Wexford, 1 unknown sex.

MULATTO BIRTHS.—Total for State, 58; 29 males and 29 females. By counties.—Cass, 10 males, 6 females; Kalamazoo, 2 males, 3 females; Berrien, 1 male, 3 females; Wayne, 3 males; Bay, 2 males, 1 female; Calhoun, 3 females; Genesee, Mecosta, each 2 males; Eaton, Ingham, Kent, each 1 male, 1 female; Isabella, Jackson, Lenawee, each 2 females; Delta, Macomb, Midland, Washtenaw, each 1 male; Clinton, Gratiot, Presque Isle, Van Buren, each 1 female.

INDIAN BIRTHS.—Total for State, 110; 49 males and 61 females. There are included in this number 1 male and 7 females of mingled white and Indian parentage. By counties.—(a) Indian: Emmet, 16 males, 16 females; Leelanau, 5 males, 7 females; Baraga, 3 males, 12 females; Isabella, 5 males, 2 females; Cheboygan, 2 males, 6 females; Schoolcraft, 5 males; Delta, 1 male, 3 females; Chippewa, 2 males, 1 female; Arenac, 2 males; Dickinson, 2 females; Allegan, Antrim, Calhoun, each 1 male, 1 female; Bay, Kent, Mason, Ontonagon, each 1 male; Alcona, Saginaw, each 1 female. (b) Halfbreeds: Barry, 1 male, 2 females; Allegan, Charlevoix, Chippewa, Delta, Emmet, each 1 female.

BIRTHS OF UNKNOWN COLOR.—Total for State, 45; 17 males, 14 females and 14 of unknown sex. By counties.—Calhoun, 8 males, 6 females; Wayne, 7 males, 5 females; Menominee, 1 male, 3 unknown sex; Chippewa, 4 unknown sex; Washtenaw, 3 unknown sex; Ionia, 2 females; Shiawassee, 1 female, 1 unknown sex; Bay, 2 unknown sex; Mecosta, 1 male; Ontonagon, 1 unknown sex.

BIRTHS BY COUNTIES, MONTHS AND SEX.

Table 21 gives a detailed statement of the number of births, by sex and months, for each county of the State. In this table is also incorporated a statement of the ratio of male births to 100 female births in each county of the State, and a NOTE appended to the table gives a full statement by counties, of the number and sex of all births, of color other than white. Only 344 such were reported against a total of 44,252 white children born. The ratio of colored births to total births is 0.67 per cent; of black births (131 in number) 0.29 per cent; of mulatto births (58 in number), 0.13 per cent; and the Indian births (110 in number), 0.25 per cent.

The number of male children born to 100 females, is, for the State, 108. This proportion obtains with trifling variations from year to year. Comparison of different portions of the State shows very different ratios, varying from only 44 males to 100 females in Alger county, and 75 males to 100 females in Keweenaw county, to 168 per 100 in Crawford, 207 per 100 in Luce, etc. As the returns were very small numerically in these counties, such extreme ratios are probably only accidental. In general, statistics based upon very small numerical values are subject to great variations from accidental causes, and, if any stress whatever be placed upon them, may become very misleading.

PARENT-NATIVITY OF CHILDREN BORN.

The four tables following relate to the important subject of the parent-nativity of children born in this State during the year 1894, together with such comparisons with the results of previous years as are necessary to a full understanding of the subject.

In discussing this question in the report for 1891 it was noted that the percentage of births of children of native-born parents had diminished with considerable uniformity since 1881, while the percentage of those born of foreign-born parents had proportionately increased. Attention was then called to the "probability, if the present rate of change continues, of the latter being in excess in another year for the first time in the history of the State registration." While the returns for 1892 so far confirmed this prediction that the percentages of children born of native-born and foreign-born parents were exactly the same (39.7 per cent), it was then pointed out that the conditions under which the progressive changes noted had taken place, had materially changed, and that "It is not probable that this change will progress in the same manner during 1893, nor, perhaps, for some years, as the closing of the mines during the winter of 1893-94 and the financial distress prevailing in the upper peninsula in consequence thereof, have greatly diminished the number of marriages from that portion of the State, which has been accustomed to furnish the largest number of marriages of foreign-born persons, together with a high birth-rate for children of foreign-born parents based thereon." These remarks have been fully justified by the results of the registration of 1893 and 1894 presented in these tables. The ratio of native-born parents has risen to 43.0 per cent of the total number, while that of foreign-born parents has fallen to 35.6 per cent, thus showing a difference of 7.4 per cent instead of the equality of the year 1892. At the ordinary rate of yearly variation, it will require several years for the old relation to be regained.

Table 22 shows the proportions, by sex, of the parents of children born of each general nativity, and of mixed nativities. In Table 23 similar comparisons are made for each of ten years, 1885-94, and the average for the ten-year period is presented. The increased proportion of native-born parents for the past two years and the constant decline in the proportion of such parents for the previous years included in the table, are well shown. By means of quinquennial averages, Table 24 compares the corresponding data as shown by registration since 1871. This Table may well be compared with the table of similar form in Part III (Table 47), showing the changes in the nativity of persons married for the same periods of time, where analogous changes may be seen to have taken place, although the ratios of native-born persons are much larger absolutely. Those of foreign-born persons consequently appear to be more prolific, since a smaller percentage of marriages produces an equal percentage of children. Additional information on this subject is presented in Table 26, in which the nationalities of parents of children born in Michigan during the year 1894 are stated, and by Tables 35 and 36, comparing the relative fecundity of native-born and foreign-born women of childbearing age, and of marriages by general nativity and nationality.

Table 22.—*Showing, by sex, the parent-nativity of children born in Michigan during the year 1894, according to the returns.*

Nativity of parents of children born, 1894.	Total births, 1894.							
	Number.				Per cent of total.			
	Total.	Males.	Fe-males.	Un-known.	Total.	Males.	Fe-males.	Un-known.
All nativities.....	44,596	23,153	21,378	65	100.0	100.0	100.0	100.0
Both parents native-born.....	19,182	9,926	9,232	24	43.0	42.9	43.2	36.9
Both parents foreign-born.....	15,864	8,237	7,609	18	35.6	35.6	35.6	27.7
Foreign father and native mother.....	5,075	2,627	2,443	5	11.4	11.3	11.4	7.7
Foreign mother and native father.....	3,024	1,620	1,398	6	6.8	7.0	6.5	9.3
Unknown mother, father native.....	275	147	128	2	.6	.6	.6	3.1
Unknown mother, father foreign.....	413	210	203	—	.9	1.0	.9	—
Unknown father, mother native.....	224	121	102	1	.5	.5	.5	1.5
Unknown father, mother foreign.....	69	32	37	—	.2	.1	.2	—
Both unknown.....	470	233	228	9	1.1	1.0	1.1	13.8
One or both native*.....	27,780	14,441	13,301	38	62.3	62.4	62.2	58.5
One or both foreign*.....	24,445	12,726	11,690	29	54.8	55.0	54.7	44.6

* Including cases where nativity of either parent is unknown.

Table 23.—*Parent-nativity of children born in Michigan for each of the years 1885-94, inclusive; with average for the ten-year period.*

Years.	Nativity of parents of children.—Per cent of total.												
	Both native-born.	Both foreign-born.	Foreign father and native mother.	Foreign mother and native father.	One or both unknown.	Father—			Mother—			One or both parents native-born.*	One or both parents foreign born.*
						Native.	Foreign.	Unknown.	Native.	Foreign.	Unknown.		
1885.....	42.3	37.0	11.6	6.5	2.7	49.0	48.7	2.3	54.2	43.7	2.1	61.0	55.4
1886.....	42.9	37.3	10.9	6.2	2.8	49.4	48.4	2.2	54.2	43.7	2.2	60.7	54.7
1887.....	43.0	36.9	10.9	6.5	2.6	49.8	48.1	2.1	54.4	43.6	1.9	61.2	50.4
1888.....	44.0	36.3	10.5	6.1	3.1	50.3	47.0	2.7	55.0	42.6	2.5	61.2	53.3
1889.....	41.8	39.0	10.7	6.0	2.6	48.1	49.9	2.1	52.9	45.1	2.0	59.1	56.0
1890.....	41.8	38.4	10.8	6.0	3.0	48.3	49.5	2.2	53.1	44.6	2.3	59.6	55.8
1891.....	40.2	39.8	10.8	6.1	3.1	46.9	51.0	2.1	51.3	46.2	2.5	58.0	57.4
1892.....	39.7	39.7	10.9	6.3	3.3	46.7	51.0	2.3	51.3	46.2	2.5	58.2	57.5
1893.....	41.1	38.5	11.0	6.6	2.9	48.0	50.0	2.1	52.6	45.3	2.1	59.5	56.7
1894.....	43.0	35.6	11.4	6.8	3.3	50.4	47.9	1.7	54.9	42.5	2.6	62.3	54.8
Average, 1885-94.	42.0	37.9	11.0	6.3	2.9	48.7	49.2	2.2	53.4	44.4	2.3	60.1	55.2

* Including cases where nativity of either parent is unknown.

Table 24.—*Parentage of children, by nativity, born in Michigan during the years 1891-94; compared with averages for the quinquennial periods 1871-75, 1876-80, 1881-85, 1886-90.*

Years and periods averaged.	Nativity of parents.—Per cent of total.				
	Both native-born.	Both foreign-born.	Foreign father and native mother.	Native father and foreign mother.	One or both unknown.
Average, 1871-75.....	44.8	34.8	9.5	5.2	6.2
Average, 1876-80.....	46.0	34.1	11.0	5.7	3.1
Average, 1881-85.....	43.7	35.5	11.5	6.2	2.9
Average, 1886-90.....	42.7	37.6	10.7	6.2	2.8
Year 1891.....	40.2	39.8	10.8	6.1	3.1
Year 1892.....	39.7	39.7	10.9	6.3	3.3
Year 1893.....	41.1	38.5	11.0	6.6	2.9
Year 1894.....	43.0	35.6	11.4	6.8	3.3

Table 25 exhibits for each county the nativity of the parents of children born in 1894. For the State, the number of parents both native-born is in excess of those of foreign birth, but in many counties, especially those of the upper peninsula and those containing large cities, the parents of foreign birth greatly outnumber the native-born parents. In the southern portion of the State and among the older settled counties where the birth-rate is small, the reverse is generally true, and the foreign-born parents are in the minority.

Among the counties showing a large predominance of births of children to parents both of whom were native-born, are: Cass, 234 to 5; Eaton, 403 to 12; Hillsdale, 310 to 5; Van Buren, 422 to 25; Branch, 314 to 29, etc.

In decided contrast to the above, the following counties with a marked excess of births of foreign parentage may be cited: Alpena, 324 to 60; Dickinson, 530 to 60; Gogebic, 428 to 64; Houghton, 1,208 to 274; Marquette, 787 to 134, etc.

Wayne county, including the city of Detroit, shows a large excess of foreign couples who were parents in 1894 over native couples; the numbers are 3,286 and 1,685 respectively, which should be understood, as in all the preceding cases, to include only cases in which both parents are of the same nativity. An excess of foreign parents may be noted in Kent (Grand Rapids) and Bay (Bay City) counties, but not in Saginaw, in which native parents are slightly in the majority.

Table 25.—*Exhibiting for the State and counties of Michigan, by sex, the parent-nativity of children returned for the year 1894. (Still-births included.)*

State and counties.	Sex of children born, 1894.	Children born, 1894.	Nativity of parents of children born in 1894.								Both unknown.
			Both native-born.	Both foreign-born.	Foreign father and native mother.	Foreign mother and native father.	Mother unknown.		Father unknown.		
							Father—		Mother—		
							Native.	Foreign.	Native.	Foreign.	
State.....	{ Total..... Males..... Females..... Unknown.....	44,596 23,153 21,378 65	19,182 9,926 9,232 24	15,864 8,237 7,609 18	5,075 2,627 2,443 5	3,024 1,620 1,398 6	275 147 126 2	413 210 208	224 121 102 1	69 32 37	470 238 228 9
Alcona.....	{ Total..... Males..... Females.....	125 65 60	37 22 15	47 22 25	25 12 13	15 8 7	1 1				
Alger.....	{ Total..... Males..... Females.....	26 8 18	6 1 5	15 4 11	4 2 2				1 1		
Allegan.....	{ Total..... Males..... Females.....	714 375 339	525 232 243	72 33 39	65 34 31	44 22 23	1 1		7 3 4		
Alpena.....	{ Total..... Males..... Females.....	482 259 223	60 35 25	324 176 148	69 36 33	28 11 17			1 1		
Antrim.....	{ Total..... Males..... Females.....	208 110 98	91 49 42	55 31 24	34 16 18	22 11 11	1 1	2 2	1 1		2 1 1
Arenac.....	{ Total..... Males..... Females.....	134 60 74	30 9 21	62 30 32	23 13 10	15 6 9	1 1			1 1	2 1 1
Baraga.....	{ Total..... Males..... Females.....	110 46 64	37 14 23	55 22 33	12 7 5	6 3 3					
Barry.....	{ Total..... Males..... Females.....	382 211 171	335 186 149	14 7 7	22 13 9	6 3 3			4 1 3		1 1
Bay.....	{ Total..... Males..... Females..... Unknown.....	1,505 788 715 2	386 195 191	744 403 340	232 118 114	131 67 68	3 3 3		7 3 4		2 2
Benzie.....	{ Total..... Males..... Females.....	164 81 83	91 39 52	31 18 13	26 16 10	14 8 6	1 1				1 1
Berrien.....	{ Total..... Males..... Females..... Unknown.....	681 365 315 1	469 254 215	98 46 52	55 34 21	38 22 15	3 2 1		4 3 4	3 3	11 5 6
Branch.....	{ Total..... Males..... Females.....	378 211 167	314 176 138	29 15 14	18 8 10	10 10	1 1		2 1 1		4 — 4
Calhoun.....	{ Total..... Males..... Females..... Unknown.....	676 328 341 7	478 238 237 3	79 33 43	52 22 29	28 14 14	11 6 5	13 9 4	12 5 7	2 1 1	1 — 1
Cass.....	{ Total..... Males..... Females.....	260 140 120	234 127 107	5 1 4	11 8 3	5 3 2	1 1		1 — 1		3 — 3

Table 25.—CONTINUED.—*Births by counties, parent-nativity and sex.*

Counties.	Sex of children born, 1894.	Children born, 1894.	Nativity of parents of children born in 1894.								Both unknown.
			Both native-born.	Both foreign-born.	Foreign father and native mother.	Foreign mother and native father.	Mother unknown.		Father unknown.		
							Father—		Mother—		
							Native.	Foreign.	Native.	Foreign.	
Charlevoix	Total	175	84	39	28	22			1		
	Males	91	38	26	14	12			1		
	Females	84	46	13	14	10					
Cheboygan	Total	354	109	136	51	41			1	1	1
	Males	190	57	69	30	25				1	
	Females	164	52	67	21	16			1		
Chippewa	Total	324	43	210	28	42				1	
	Males	160	22	99	17	22					
	Females	159	21	107	11	19				1	
	Unknown	5		4		1					
Clare	Total	161	76	35	32	16	1				
	Males	83	32	21	21	8	1				
	Females	78	44	14	11	8					
Clinton	Total	387	306	21	33	15	2		1	1	
	Males	193	155	12	19	6					
	Females	193	151	9	14	9	2		1	1	
	Unknown	1									
Crawford	Total	51	20	15	5	8					
	Males	32	11	10	4	5					
	Females	19	9	5	1	3					
Delta	Total	426	92	243	66	20	1	1	3		
	Males	235	47	137	38	9	1	1	2		
	Females	191	45	106	28	11			1		
Dickinson	Total	648	60	530	40	8			4	4	2
	Males	331	34	271	19	4			1	1	1
	Females	317	26	259	21	4			3	3	1
Eaton	Total	469	403	12	24	23			5		2
	Males	247	206	6	12	17			4		
	Females	222	197	6	12	6			1		
Emmet	Total	177	110	23	18	15	1		2		3
	Males	90	57	12	8	9	1		1		2
	Females	87	53	16	10	6			1		1
Genesee	Total	592	433	47	43	56	4	1			8
	Males	300	223	19	25	30					3
	Females	292	210	28	18	26	4	1			5
Gladwin	Total	49	12	18	13	6					
	Males	30	8	11	8	3					
	Females	19	4	7	5	3					
Gogebic	Total	552	64	423	24	5				1	30
	Males	299	35	233	15	5				1	10
	Females	253	29	195	9						20
Gr'd Traverse	Total	310	187	53	43	19	1		6		1
	Males	156	96	23	24	8	1		3		1
	Females	154	91	30	19	11			3		
Gratiot	Total	458	366	19	29	32	3	2	6		1
	Males	215	171	12	16	9	1	1	4		1
	Females	243	195	7	13	23	2	1	2		
Hillsdale	Total	344	310	5	8	8	3		4		6
	Males	190	174	3	4	5			2		2
	Females	152	135	2	4	3	2		2		4
	Unknown	2	1				1				

Table 25.—CONTINUED.—*Births by counties, parent-nativity and sex.*

Counties.	Sex of children born, 1894.	Children born, 1894.	Nativity of parents of children born in 1894.								Both unknown.
			Both native-born.	Both foreign-born.	Foreign father and native mother.	Foreign mother and native father.	Mother unknown.		Father unknown.		
							Father—		Mother—		
							Native.	Foreign.	Native.	Foreign.	
Houghton	Total Males Females Unknown	1,816 956 851 9	274 151 116 7	1,208 646 561 1	235 111 124	64 30 34	10 4 6	2 1 2	2 1 1	21 13 7 1	
Huron	Total Males Females	870 447 423	162 84 78	451 217 234	168 95 73	80 44 36	1 1	1 1	4 3 1	2 2 1	1 4 1
Ingham	Total Males Females Unknown	582 315 266 1	426 230 196	67 33 34	33 19 14	34 19 15	5 4 1	3 1	7 5 2	1 1 1	6 4 1 1
Ionia	Total Males Females Unknown	454 251 202 1	350 194 155 1	32 16 16	47 28 19	13 7 6	5 4 1	1 1	2 1 1	1 1 1	4 1 3
Iosco	Total Males Females Unknown	281 148 132 1	42 27 15	167 85 81	37 18 19	33 17 16	1 1	1 1	1 1	1 1	1 1
Iron	Total Males Females	128 64 64	26 14 12	93 46 47	7 2 5	2 2					
Isabella	Total Males Females	476 253 223	251 134 117	121 64 57	65 37 28	38 18 20					1 1
Jackson	Total Males Females	781 377 404	549 256 293	114 53 61	70 40 30	39 24 15	3 1 2	1 1	2 2 1	1 1	2 2
Kalamazoo	Total Males Females Unknown	697 353 343 1	410 203 207	161 82 79	60 30 29	48 26 22	3 3 1	1 1	9 5 4	1 1	5 4 1
Kalkaska	Total Males Females	87 45 42	56 30 26	7 4 3	18 8 10	6 3 3					
Kent	Total Males Females Unknown	2,585 1,345 1,236 4	1,004 528 474 2	1,083 559 524	255 136 119	159 81 78	5 1 4	5 2 3	6 5 1	3 3	65 38 30 2
Keweenaw	Total Males Females	91 39 52	12 3 9	60 27 33	16 6 10	2			1 1		
Lake	Total Males Females	118 57 61	71 30 41	25 13 12	11 7 4	8 5 3	2 1 1			1 1	
Lapeer	Total Males Females	401 198 203	207 101 106	66 29 37	62 27 35	56 34 22	2 2 1	3 2	2 2 1	1 1	2 2
Leelanau	Total Males Females	243 131 112	120 65 55	74 38 36	30 17 13	13 6 7	2 1		2 2		2 2
Lenawee	Total Males Females	638 312 321	491 235 256	61 30 31	48 26 22	27 17 10	1 1	1 1	2 1 1	2 1	2 2

Table 25.—CONTINUED.—*Births by counties, parent-nativity and sex.*

Counties.	Sex of children born, 1894.	Children born, 1894.	Nativity of parents of children born in 1894.								Both unknown.
			Both native-born.	Both foreign-born.	Foreign father and native mother.	Foreign mother and native father.	Mother unknown.		Father unknown.		
							Father—		Mother—		
							Native.	Foreign.	Native.	Foreign.	
Livingston	Total	312	243	18	27	22	1	1			
	Males	162	131	7	12	11	1				
	Females	150	112	11	15	11		1			
Luce	Total	47	7	31	2	7					
	Males	31	4	21		6					
	Females	15	2	10	2	1					
	Unknown	1	1								
Mackinac	Total	182	75	67	13	6	3	4	2	1	11
	Males	86	30	33	6	5	2	1	1		8
	Females	96	45	34	7	1	1	3	1	1	3
Macomb	Total	590	328	126	77	59					
	Males	305	175	62	34	34					
	Females	284	152	64	43	25					
	Unknown	1	1								
Manistee	Total	790	152	519	76	39			2	2	
	Males	400	87	256	40	15			1	1	
	Females	390	65	263	36	24			1	1	
Manitou	Total	15	9	3	1	2					
	Males	8	5	2	1						
	Females	7	4	1		2					
Marquette	Total	1,071	184	787	105	38			2	2	3
	Males	559	70	410	59	16			1	2	1
	Females	512	64	377	46	22			1		2
Mason	Total	448	138	231	50	24		1	2	1	1
	Males	220	73	106	26	14		1			
	Females	228	65	125	24	10			2	1	1
Mecosta	Total	370	205	86	44	28			5	1	1
	Males	178	99	41	21	13			4		
	Females	190	105	45	23	14			1	1	1
	Unknown	2	1			1					
Menominee	Total	695	120	422	102	30	2	5	3	1	10
	Males	367	71	225	48	15	2				6
	Females	325	48	195	54	15		5	3	1	4
	Unknown	3	1	2							
Midland	Total	265	121	69	39	31			4		1
	Males	142	67	39	14	20			2		
	Females	123	54	30	25	11			2		1
Missaukee	Total	168	53	73	28	10	2	1			1
	Males	71	17	34	14	4	1	1			
	Females	94	34	39	14	6					1
	Unknown	3	2				1				
Monroe	Total	603	491	38	47	22			3		2
	Males	314	251	20	27	12			3		1
	Females	289	240	18	20	10					1
Montcalm	Total	545	358	100	56	27		2	1		1
	Males	284	179	58	29	16		1	1		
	Females	260	178	42	27	11		1			1
	Unknown	1	1								
Montmorency	Total	58	22	21	9	6					
	Males	31	13	12	5	2					
	Females	27	10	9	4	4					

Table 25.—CONTINUED.—*Births by counties, parent-nativity and sex.*

Counties.	Sex of children born, 1894.	Children born, 1894.	Nativity of parents of children born in 1894.								Both unknown.
			Both native-born.	Both foreign-born.	Foreign father and native mother.	Foreign mother and native father.	Mother unknown.		Father unknown.		
							Father—		Mother—		
							Native.	Foreign.	Native.	Foreign.	
Muskegon.....	{ Total..... Males..... Females..... Unknown.....	770 397 372 1	256 123 133 1	373 202 170 1	83 39 44	48 28 20	----- ----- ----- -----	4 2 2	1 ----- 1	1 1 ----- -----	4 2 2
Newaygo.....	{ Total..... Males..... Females.....	331 166 165	201 99 102	54 28 26	42 22 20	30 16 14	----- ----- -----	----- ----- -----	3 1 2	1 ----- 1	----- ----- -----
Oakland.....	{ Total..... Males..... Females.....	522 278 244	372 202 170	54 27 27	51 24 27	37 21 16	4 ----- 2	----- ----- 2	3 ----- 2	----- 1 -----	1 ----- -----
Oceana.....	{ Total..... Males..... Females.....	265 149 116	178 98 80	37 24 13	24 12 12	18 10 8	3 2 1	2 1 1	3 2 1	----- ----- -----	----- ----- -----
Ogemaw.....	{ Total..... Males..... Females.....	55 29 26	20 10 10	14 6 8	12 7 5	9 6 3	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----
Ontonagon.....	{ Total..... Males..... Females..... Unknown.....	79 40 37 2	33 14 19	15 9 5	9 4 4	1 1 -----	9 7 -----	8 2 6	3 3 -----	----- ----- -----	1 ----- -----
Osceola.....	{ Total..... Males..... Females.....	371 206 165	172 92 80	102 56 46	69 43 26	25 15 10	1 ----- 1	----- ----- -----	1 ----- 1	----- ----- -----	----- ----- -----
Oscoda.....	{ Total..... Males..... Females.....	31 21 10	18 13 5	4 3 1	6 4 2	2 1 -----	----- ----- -----	----- ----- -----	1 ----- 1	----- ----- -----	----- ----- -----
Otsego.....	{ Total..... Males..... Females.....	99 56 43	38 23 15	44 23 21	7 3 4	6 4 2	----- ----- -----	----- ----- -----	2 2 -----	----- ----- -----	----- ----- -----
Ottawa.....	{ Total..... Males..... Females.....	792 408 384	348 188 160	262 133 129	99 44 55	68 35 33	3 ----- 3	1 ----- 1	7 5 2	----- ----- -----	----- ----- -----
Presque Isle..	{ Total..... Males..... Females.....	171 102 69	28 18 10	82 46 36	35 18 17	10 7 3	7 6 1	6 4 2	2 2 -----	----- ----- -----	----- ----- -----
Roscommon....	{ Total..... Males..... Females.....	31 15 16	12 7 5	10 4 6	4 1 3	3 2 1	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----
Saginaw.....	{ Total..... Males..... Females..... Unknown.....	1,866 927 935 4	733 367 365 1	613 307 305 1	296 137 158 1	173 91 82 -----	1 1 ----- -----	1 1 ----- -----	19 8 10 1	14 5 9 -----	16 10 6 -----
Sanilac.....	{ Total..... Males..... Females.....	694 384 310	182 100 82	275 146 129	130 72 58	94 60 34	3 1 2	3 ----- 3	3 2 1	1 1 -----	----- ----- -----
Schoolcraft...	{ Total..... Males..... Females.....	194 101 93	37 22 15	113 54 59	25 14 11	17 9 8	1 1 -----	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----
Shiawassee....	{ Total..... Males..... Females..... Unknown.....	433 235 196 2	289 155 134	55 31 23	48 28 20	27 14 13	6 4 2	1 1 -----	1 ----- 1	----- ----- -----	----- ----- -----

Table 25.—CONCLUDED.—*Births by counties, parent-nativity and sex.*

Counties.	Sex of children born, 1894.	Children born, 1894.	Nativity of parents of children born in 1894.									Both unknown.
			Both native-born.	Both foreign-born.	Foreign father and native mother.	Foreign mother and native father.	Mother unknown.		Father unknown.			
							Father—		Mother—			
							Native.	Foreign.	Native.	Foreign.		
St. Clair.....	{ Total.....	997	415	271	167	123	12	4	4	1	---	
	{ Males.....	509	224	131	91	50	8	3	2	---	---	
	{ Females.....	488	191	140	76	73	4	1	2	1	---	
St. Joseph.....	{ Total.....	297	235	28	15	14	1	---	---	2	2	
	{ Males.....	157	127	12	7	8	1	---	---	1	1	
	{ Females.....	140	108	16	8	6	---	---	---	1	1	
Tuscola.....	{ Total.....	489	245	84	85	71	---	---	3	---	---	
	{ Males.....	261	126	54	41	37	---	---	2	---	---	
	{ Females.....	228	119	30	44	34	---	---	1	---	---	
Van Buren.....	{ Total.....	487	422	25	19	16	---	---	2	---	---	
	{ Males.....	264	228	14	10	10	---	---	---	---	---	
	{ Females.....	223	194	11	9	6	---	---	2	---	---	
Washtenaw.....	{ Total.....	716	430	120	89	48	16	7	---	1	5	
	{ Males.....	399	237	78	43	27	7	5	---	---	2	
	{ Females.....	313	192	41	46	19	9	2	---	1	3	
	{ Unknown.....	4	1	1	---	2	---	---	---	---	---	
Wayne.....	{ Total.....	6,876	1,685	3,286	756	500	128	316	25	15	165	
	{ Males.....	3,554	819	1,734	391	276	62	167	14	7	84	
	{ Females.....	3,316	865	1,551	364	224	66	149	11	8	78	
	{ Unknown.....	6	1	1	1	---	---	---	---	---	3	
Wexford.....	{ Total.....	306	158	93	33	13	3	---	4	---	---	
	{ Males.....	157	85	42	16	9	2	---	2	---	---	
	{ Females.....	149	73	51	17	4	1	---	2	---	---	

PARENT-NATIONALITY OF CHILDREN BORN IN MICHIGAN, 1894.

Table 26 presents the first information concerning the nationalities of parents of children born in Michigan ever compiled. In the preceding tables in this report relating to general nativity, and in all the similar tables presented for previous years, the distinction of native-born and foreign-born only has been made. It is obvious that such distinction of general nativity is not sufficiently exact for either practical or scientific purposes, since many of these nationalities differ among themselves both in numerical importance and in prolificness even more than they do from the native-born. Nor does it satisfactorily answer the questions of the British, the German, the Dutch, the Swedish, or other citizens of foreign-birth as to how their various nationalities are maintaining themselves upon their adopted soil, to make reply in terms of general nativity only. The finer distinctions between the different nationalities are essential and the statistics so compiled contain much information of interest to all classes of the population.

By its cross-arrangement Table 26 shows the composition of the families returning births for the year 1894 with respect to the country of birth of father and mother. The column on the right indicates the birthplaces of the fathers returned. Taking, for instance, Germany, and reading the horizontal column to the right, we find that 1,239 children were born in Michigan in 1894 whose fathers were born in Germany and whose mothers were born in the United States; 105 had German

fathers and Canadian mothers; 6, 2, and 10, respectively, had German fathers and English (or Welsh), Scotch, and Irish mothers; 4,469 had both parents of German birth; etc., etc. Passing to the right of the table, we find that the total number of children born to German fathers during the year was 6,196, which number was 13.9 per cent of the total number of fathers. In a similar way, reading down the vertical columns, the number of mothers of any given nationality can be ascertained,

Table 26.—*Nationality of parents*

Fathers born in—	Mothers								
	United States.	Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.	Holland.	Belgium.
United States.....	19,182	1,692	201	32	134	646	8	145	4
Canada.....	2,388	3,294	109	26	63	87	1	6	2
England and Wales...	485	178	563	15	21	26		1	1
Scotland.....	81	69	18	80	13	2		1	1
Ireland.....	254	99	13	4	246	9		1	1
Germany.....	1,239	105	6	2	10	4,469	8	19	1
Austria.....	14	3				7	252		
Holland.....	212	1		1	3	19		1,011	1
Belgium.....	29	5			1	4		2	82
Switzerland.....	21	7	1	1		13			1
Norway.....	24	5	1			3			
Sweden.....	69	6	1			6			
Denmark.....	47	4	1			4		1	
Russia (Finland).....	19	3				13			
Hungary.....	2		1				1		
Bohemia.....	11	2				3	1		
Poland.....	45	1			1	23			
France.....	23	9		1	1	6		1	
Italy.....	10	2			1	1			
All others.....	102	10				1			
Unknown.....	224	25	6	1		25		1	
Total mothers.....	24,481	5,520	921	163	494	5,367	271	1,189	94
Per cent.....	54.9	12.4	2.0	.4	1.1	12.0	.6	2.7	.2

together with the proportion of fathers of each nationality with whom they are united.

A table of precisely similar form (Table 50) has been constructed for marriages. It is evident that comparison of these two tables will, with certain precautions, afford a measure of the fecundity of marriages of different nationalities. Such comparison may be made, so far as the data at hand will permit, in Table 39.

of children born in Michigan, 1894.

born in—												Total fathers.	Per cent.
Switz- erland.	Nor- way.	Swe- den.	Den- mark.	Russia (Fin- land).	Hun- gary.	Bohe- mia.	Pol- and.	France.	Italy.	All others.	Unk.		
9	20	28	15	4	-----	14	7	12	1	52	275	22,481	50.4
3	2	8	2	1	-----	3	1	4	-----	17	59	6,076	13.6
-----	4	6	-----	-----	-----	-----	1	2	-----	1	14	1,318	2.9
-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	6	272	.6
-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	9	637	1.4
9	3	10	5	10	-----	6	14	2	-----	3	275	6,196	13.9
-----	1	-----	-----	2	-----	1	-----	-----	-----	1	1	282	.6
1	2	2	2	-----	-----	1	1	-----	-----	-----	8	1,265	2.8
-----	-----	1	-----	-----	-----	-----	-----	1	-----	-----	1	126	.3
33	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	3	81	.2
1	252	16	3	13	-----	-----	-----	-----	-----	-----	2	320	.7
-----	26	1,076	11	13	-----	-----	-----	-----	-----	1	4	1,213	2.7
-----	6	15	209	-----	-----	-----	-----	-----	-----	-----	2	289	.6
-----	18	8	1	859	-----	-----	2	-----	-----	-----	4	927	2.0
-----	-----	-----	-----	-----	6	-----	-----	-----	-----	-----	-----	10	-----
-----	-----	-----	-----	-----	-----	63	-----	-----	-----	-----	-----	80	.2
-----	-----	-----	-----	-----	-----	3	1,019	1	1	-----	17	1,111	2.5
1	-----	1	-----	-----	-----	-----	1	21	-----	-----	2	67	.2
1	-----	-----	-----	-----	-----	-----	-----	-----	219	-----	1	235	.5
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	729	5	847	1.9
-----	2	3	-----	2	-----	-----	3	-----	-----	1	470	763	1.7
58	336	1,176	248	904	6	91	1,049	43	221	806	1,158	44,596	-----
.1	.8	2.6	.6	2.0	-----	.2	2.4	.1	.5	1.8	2.6	-----	100.0

In Table 27 the rates per 1,000 population of persons becoming parents during the year 1894 are given for each nationality. It must be remembered that the age-distribution of the natives of the United States and those born in foreign countries is very different, and that the latter would naturally show a considerably higher rate of parentage from the larger proportion of adults. Taking the foreign nationalities among themselves, considerable differences doubtless exist in the same respect owing to the different periods of maximum immigration. Nationalities that have been some time in the State, like England and Ireland, show lower rates than fresh arrivals, such as Russia, Poland, Sweden, etc. The rate for "all others" is far too large, a discrepancy due to the fact that a large number of birthplaces were stated as "Europe" in the supervisors' returns; in the census there were comparatively few of these indefinitely reported nativities. As this is the first comparative statement of parentage and population by nationality, and as the numbers returned for certain nationalities are quite small, it is evident that the experience of a series of years will be necessary before very definite conclusions can be reached. The figures given, therefore, in the present Report, must be regarded as merely suggestive, but there is little doubt that their general indications will be corroborated by future experience.

Table 27.—Number of persons of each nationality who became parents in Michigan during the year 1894, with rates per 1,000 population of like nationality.

Country of birth.	Population, 1894.	Parents of children born, 1894.	Parent rate per 1,000 inhabitants of same nationality.
United States.....	1,670,786	46,962	28.1
Canada.....	200,447	11,596	57.9
England and Wales.....	49,314	2,239	45.4
Scotland.....	11,849	435	36.7
Ireland.....	35,221	1,131	32.1
Germany.....	143,057	11,563	80.8
Austria.....	4,651	553	118.9
Holland.....	32,868	2,454	74.7
Belgium.....	2,882	220	76.3
Switzerland.....	3,045	139	45.6
Norway.....	8,173	656	80.3
Sweden.....	28,197	2,389	84.7
Denmark.....	7,339	537	73.2
Russia.....	16,152	1,831	113.4
Hungary.....	439	16	36.4
Bohemia.....	2,757	171	62.0
Poland.....	15,366	2,160	140.6
France.....	2,849	110	38.6
Italy.....	3,397	456	134.2
All others.....	2,852	1,653	579.6
Unknown.....	-----	1,921	-----

Table 28 shows the distribution of the children born in Michigan during the year 1894, by parent-nationality, through the several counties of the State. It will be found of much local interest, and in connection with the widely-differing birth-rates for the various nationalities, will explain the different rates of natural increase in the different counties. It should be examined in connection with Table 18, page 68, which gives the corresponding distribution of population.

STILL-BIRTHS, TWINS AND ILLEGITIMATES.

Tables 29 to 35, inclusive, are devoted to the consideration of certain classes of births of peculiar interest, namely, births of still-born children, of twins and of illegitimate children. Still-births are returned as deaths as well as births, and in practice it is found that a careful comparison of the two sets of returns is necessary in order that none may be omitted or twice counted. Still-births are defined, for registration purposes, in the instructions issued to the enumerators (supervisors), as cases in which the children were *born dead*, not having lived an appreciable time, hours or days, after birth. It was observed in the examination of the returns that frequently cases would be reported as "still-born" in which the child was also reported to have lived a day or more. For such cases the enumerators are directed to report another cause of death, and the term "unknown" is substituted for "still-born" if no other cause can be ascertained.

Following the custom practised in these reports since 1868, still-births are compiled both as births and deaths; since 1873 the still-births returned in each set of returns have been individually compared, and the total number, exclusive of duplicates, has been inserted in all the tables of births and of deaths. This is not the usual statistical practice, which is to exclude still-births from both births and deaths, since they do not add to the population or decrease it. For comparison with statistics of other states and countries it is usually necessary, therefore, to diminish the Michigan returns of deaths by about five per cent, this being the usual percentage of still-births to total deaths, and the returns of births by about two per cent for a similar reason. In Table 9, Part I, may be found a statement of still-births and still-birth-rates registered for each year of registration, together with comparisons with total births and deaths. It is a preliminary step to the separate statement of still-births, apart from both births and deaths. In the tables in Part IV, accordingly, still-births are separated from other deaths under one year of age.

Table 29 shows the number of twins, illegitimates, and still-births returned for each county in the State. From certain counties the returns are obviously imperfect, owing, probably, to negligence in making the transcript. It is probably true that all of these returns are below the truth, owing to the obvious difficulty of securing full reports, but ordinarily the numbers reported from different counties should afford a fair basis of comparison.

Table 28.—*Exhibiting, for the State and counties, the nationalities of the*

State and counties.	Total children born, 1894.	Sex of parents.	Total foreign-born parents, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
State.....	44,596	{ Total..... Males..... Females.....	40,309 21,352 18,957	11,596 6,076 5,520	2,239 1,318 921	435 272 163	1,131 637 494	11,563 6,196 5,367	553 282 271
Alcona.....	125	{ Total..... Males..... Females.....	134 72 62	115 61 54	4 3 1	3 2 1	2 2 -----	3 1 2	-----
Alger.....	26	{ Total..... Males..... Females.....	34 19 15	24 13 11	1 1 -----	1 1 -----	1 ----- 1	-----	-----
Allegan.....	714	{ Total..... Males..... Females.....	253 137 116	33 17 16	11 7 4	4 2 2	11 8 3	69 39 30	2 2 -----
Alpena.....	482	{ Total..... Males..... Females.....	745 393 352	373 198 175	22 10 12	5 5 -----	6 6 -----	187 96 91	-----
Antrim.....	208	{ Total..... Males..... Females.....	168 91 77	87 46 41	5 2 3	----- ----- -----	2 1 1	14 8 6	-----
Arenac.....	134	{ Total..... Males..... Females.....	163 85 78	126 65 61	5 3 2	6 2 4	3 1 2	19 11 8	-----
Baraga.....	110	{ Total..... Males..... Females.....	128 67 61	60 32 28	4 3 1	----- ----- -----	----- ----- -----	2 1 1	-----
Barry.....	382	{ Total..... Males..... Females.....	56 36 20	21 14 7	11 8 3	----- ----- -----	6 4 2	11 6 5	-----
Bay.....	1,505	{ Total..... Males..... Females.....	1,851 976 875	782 419 363	34 18 16	14 10 4	44 25 19	429 222 207	-----
Benzie.....	164	{ Total..... Males..... Females.....	102 57 45	36 20 16	8 7 1	1 1 -----	3 1 2	8 4 4	-----
Berrien.....	681	{ Total..... Males..... Females.....	292 153 139	26 15 11	10 5 5	----- ----- -----	5 4 1	220 115 105	2 ----- 2
Branch.....	378	{ Total..... Males..... Females.....	86 47 39	12 6 6	5 3 2	----- ----- -----	4 3 1	37 19 18	-----
Calhoun.....	676	{ Total..... Males..... Females.....	253 144 109	51 26 25	45 25 20	12 7 5	30 18 12	107 64 43	-----
Cass.....	280	{ Total..... Males..... Females.....	26 16 10	8 6 2	3 2 1	----- ----- -----	3 2 1	9 4 5	-----
Charlevoix.....	175	{ Total..... Males..... Females.....	128 67 61	76 41 35	6 2 4	3 2 1	2 2 -----	24 12 12	-----
Cheboygan.....	354	{ Total..... Males..... Females.....	365 187 178	224 117 107	16 6 10	4 1 3	18 10 8	59 33 26	-----
Chippewa.....	324	{ Total..... Males..... Females.....	491 238 253	398 183 215	27 15 12	8 5 3	23 16 7	15 8 7	-----

NATIONALITY OF PARENTS.

99

foreign-born parents of children born in Michigan during the year 1894.

born parents, 1894.

Hol- land.	Bel- gium.	Switz- erland.	Nor- way.	Swe- den.	Den- mark.	Rus- sia, (Fin- land).	Hun- gary.	Bohe- mia.	Pol- and.	France.	Italy.	All others.
2,454 1,285 1,189	220 126 94	139 81 58	656 320 336	2,389 1,213 1,176	537 289 248	1,831 927 904	16 10 6	171 80 91	2,160 1,111 1,049	110 67 43	456 235 221	1,653 847 806
			1	3					2	1		
			1	2					1	1		
				5		2						
				3		1						
				2		1						
57		1	1	2	5				9			48
25		1		1	3				5			27
32			1	1	2				4			21
		1	39	3		21	2		82	2		2
		1	19	2		11	1		42	1		1
			20	1		10	1		40	1		1
12		10	8	10	4	1		11				4
6		6	4	6	2	1		6				3
6		4	4	4	2			5				1
				1				1				
								1		1		1
				1								
		8	20			26			8			
		4	10			13			4			
		4	10			13			4			
5					1			1				
3					1							
2								1				
28	5	7	4	36	1	27		2	410	7	4	17
13	4	4	3	18		14		1	212	4	2	7
15	1	3	1	18	1	13		1	198	3	2	10
	9		27	7	2							1
	5		15	2	1							1
	4		12	5	1							
2				11	1	11			3		1	
1				5		5			1			
1				6		6			2			
						3			9		2	14
						2			5		1	8
						1			4		1	6
1		2		2						2		1
1		1		2						1		1
		1		2								
		1		1								
3				7	2							5
2				3	1							2
1				4	1							3
1			1	13		4			4	1		20
				6		1			2			10
1			1	7		3			2			10
				3		12			1		4	
				2		7					2	
				1		5			1		2	

Table 28.—CONTINUED.—Nationalities of the foreign-born

Counties.	Total children born, 1894.	Sex of parents.	Total foreign-born parents, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
Clare.....	161	{ Total..... Males..... Females.....	118 67 51	94 53 41	5 2 3	2 2	----- ----- -----	9 5 4	----- ----- -----
Clinton.....	387	{ Total..... Males..... Females.....	91 54 37	29 18 11	6 3 3	1 ----- 1	3 2 1	50 30 20	1 ----- 1
Crawford.....	51	{ Total..... Males..... Females.....	43 20 23	29 14 15	1 1	1 ----- 1	----- ----- -----	4 1 3	1 1 -----
Delta.....	426	{ Total..... Males..... Females.....	573 310 263	237 133 104	9 7 2	4 1 3	25 16 9	48 23 25	----- ----- -----
Dickinson.....	648	{ Total..... Males..... Females.....	1,112 570 542	510 311 99	158 85 73	3 2 1	3 2 1	64 32 32	118 59 59
Eaton.....	469	{ Total..... Males..... Females.....	71 36 35	35 16 19	18 11 7	----- ----- -----	2 1 1	12 6 6	----- ----- -----
Emmet.....	177	{ Total..... Males..... Females.....	89 46 43	38 19 19	1 ----- 1	2 1 1	3 2 1	36 19 17	1 ----- 1
Genesee.....	592	{ Total..... Males..... Females.....	194 91 103	127 56 71	21 12 9	2 1 1	14 7 7	23 12 11	2 1 1
Gladwin.....	49	{ Total..... Males..... Females.....	55 31 24	49 27 22	2 2	1 1	1 ----- 1	2 1 1	----- ----- -----
Gogebic.....	552	{ Total..... Males..... Females.....	886 452 434	36 22 14	35 19 16	1 1	1 1	26 14 12	19 10 9
Gd. Traverse.....	310	{ Total..... Males..... Females.....	168 96 72	63 37 26	7 4 3	6 5 1	4 3 1	20 12 8	3 1 2
Gratiot.....	458	{ Total..... Males..... Females.....	101 50 51	60 31 29	13 7 6	2 1 1	6 2 4	15 7 8	----- ----- -----
Hillsdale.....	344	{ Total..... Males..... Females.....	26 13 13	5 2 3	8 5 3	----- ----- -----	3 ----- 3	9 5 4	----- ----- -----
Houghton.....	1,816	{ Total..... Males..... Females.....	2,727 1,453 1,274	563 301 262	332 200 132	20 12 8	88 51 37	165 98 67	186 95 91
Huron.....	870	{ Total..... Males..... Females.....	1,153 620 533	623 328 295	20 14 6	18 15 3	28 15 13	350 187 163	----- ----- -----
Ingham.....	582	{ Total..... Males..... Females.....	205 103 102	51 24 27	17 9 8	1 1 -----	4 3 1	123 63 60	----- ----- -----
Ionia.....	454	{ Total..... Males..... Females.....	125 80 45	41 26 15	15 13 2	----- ----- -----	10 5 5	44 27 17	----- ----- -----
Iosco.....	281	{ Total..... Males..... Females.....	405 205 200	187 95 92	9 6 3	2 1 -----	3 3 -----	102 49 53	----- ----- -----

born parents, 1894.

Holland.	Belgium.	Switzerland.	Norway.	Sweden.	Denmark.	Russia, (Finland).	Hungary.	Bohemia.	Poland.	France.	Italy.	All others.
4 2 2			3 2 1	1 1								
							1 1					
				1 1	5 8 2					1 1		
3 3	17 10 7	1 1	26 12 14	142 70 72	21 12 9	16 8 8		11 6 5			2 1 1	5 3 2
	42 21 21	3 2 1	5 3 2	327 164 183	5 2 3	39 19 20			9 5 4		126 63 63	
		2 1 1				2 1 1						
			1 1	1 1		2 1 1			3 1 2			1 1
					2 2			1 1			2 2	
2 1 1			5 2 3	47 22 25		50 25 25		6 3 3	36 18 18		32 16 16	590 298 292
6 3 3			4 2 2	8 4 4	2 2	10 5 5	2 1 1	30 15 15	1 1			2 1 1
2 1 1			2 1 1							1 1		
												1 1
	2 1 1	15 10 5	131 60 71	123 66 62	3 2 1	842 427 415	4 2 2	2 1 1	89 46 43	4 3 1	146 75 71	7 3 4
1 1		3 2 1	4 3 1	1 1		2 1 1			91 47 44	7 5 2		5 1 4
		3 2 1	2 1 1	1 1	3 3							
1 1				2 1 1	2 2				10 5 5			
				32 17 15		58 27 31			11 6 5			1 1

Table 28.—CONTINUED.—Nationalities of the foreign-born

Counties.	Total children born, 1894.	Sex of parents.	Total foreign-born parents, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
Iron.....	128	Total.....	195	27	13		7	19	2
		Males.....	100	17	6		3	9	1
		Females.....	95	10	7		4	10	1
Isabella.....	476	Total.....	345	274	17	2	12	33	
		Males.....	186	142	11	1	8	21	
		Females.....	159	132	6	1	4	12	
Jackson.....	781	Total.....	339	62	82	10	34	127	
		Males.....	185	32	49	6	18	70	
		Females.....	154	30	33	4	16	57	
Kalamazoo.....	697	Total.....	431	35	22	6	23	54	
		Males.....	222	22	11	4	10	28	
		Females.....	209	13	11	2	13	26	
Kalkaska.....	87	Total.....	38	20	2	1	1	7	
		Males.....	25	13		1	1	5	
		Females.....	13	7	2			2	
Kent.....	2,585	Total.....	2,588	275	43	14	55	358	3
		Males.....	1,343	149	26	8	18	187	2
		Females.....	1,245	126	17	6	26	171	1
Keweenaw.....	91	Total.....	138	7	18		3	12	
		Males.....	76	6	11		1	9	
		Females.....	62	1	7		2	3	
Lake.....	118	Total.....	70	41	4		3	6	1
		Males.....	36	22	2		1	2	1
		Females.....	34	19	2		2	4	
Lapeer.....	401	Total.....	254	155	10	5	1	79	
		Males.....	131	80	7	2	1	39	
		Females.....	123	75	3	3		40	
Leelanau.....	243	Total.....	191	42	6			45	3
		Males.....	104	26	4			23	1
		Females.....	87	16	2			22	2
Lenawee.....	633	Total.....	198	29	14	1	21	117	1
		Males.....	110	16	9	1	11	63	1
		Females.....	88	13	5		10	54	
Livingston.....	312	Total.....	86	31	17		4	25	
		Males.....	46	12	10		3	16	
		Females.....	40	19	7		1	9	
Luce.....	47	Total.....	71	41	2	2	4	4	
		Males.....	33	17	1	1	3	2	
		Females.....	38	24	1	1	1	2	
Mackinac.....	182	Total.....	158	110	7	3	5	5	
		Males.....	84	56	4	3	4	3	
		Females.....	74	54	3		1	2	
Macomb.....	590	Total.....	388	71	15		4	271	
		Males.....	203	30	9		3	145	
		Females.....	185	41	6		1	126	
Manistee.....	790	Total.....	1,155	99	17	2	5	401	1
		Males.....	595	57	11	2	1	208	1
		Females.....	560	42	6		4	198	
Manitou.....	15	Total.....	9				6		
		Males.....	4				3		
		Females.....	5				3		
Marquette.....	1,071	Total.....	1,719	405	328	11	54	69	1
		Males.....	892	210	182	6	31	34	
		Females.....	827	195	146	5	23	35	1

NATIONALITY OF PARENTS.

103

parents of children born in Michigan.

born parents, 1894.

Hol- land.	Bel- gium.	Switz- erland.	Nor- way.	Swe- den.	Den- mark.	Rus- sia, (Fin- land).	Hun- gary.	Bohe- mia.	Pol- land.	France.	Italy.	All others.
			12	56	9	39		1	4		6	
			7	28	5	19			2		3	
			5	28	4	20		1	2		3	
		1				5				1		
		1				2						
						3				1		
				1	3	3		1	12		2	2
				1	1	1			6		1	1
				1	2	2		1	6		1	1
286				1								4
144				1								2
142												2
		1	2		3							1
		1	1		3							1
		1										
1,143	1	21	6	105	36	10	5	16	213		8	276
586	1	9	4	53	17	5	3	7	111		4	142
557		12	2	52	19	5	2	9	102		4	134
			10	1		83			4			
			5	1		41			2			
			5			42			2			
			1	14								
			1	7								
				7								
					4							
					2							
					2							
	1	1	37	12	1			20	23			
	1	1	19	8				9	12			
			18	4	1			11	11			
		4		3					2	2		4
		2		1					1	2		3
		2		2					1			1
					8							1
					4							1
					4							
	1	1		10		6						
	1			5		3						
		1		5		3						
	1		2	15	2	2					6	
			1	8	1	1					3	
	1		1	7	1	1					3	
	20	3			2	1				1		
	11	2			1	1				1		
	9	1			1							
1	3		45	185	90	3		2	299	2		
	2		20	94	49	1		1	152	1		
1	1		25	91	41	2		1	147	1		
				3								
				1								
				2								
2	30	1	100	368	20	301			5	5	18	1
1	16	1	49	185	10	150			3	4	9	1
1	14		51	183	10	151			2	1	9	

Table 28.—CONTINUED.—Nationalities of the foreign-born

Counties.	Total children born, 1894.	Sex of parents.	Total foreign-born parents, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
Mason.....	448	Total.....	538	149	8	2	13	96	7
		Males.....	282	80	7	1	8	49	3
		Females.....	256	69	1	1	5	47	4
Mecosta.....	370	Total.....	245	109	7	1	6	74	-----
		Males.....	130	60	5	1	3	37	-----
		Females.....	115	49	2	-----	3	37	-----
Menominee....	696	Total.....	982	251	5	8	8	88	6
		Males.....	529	144	5	4	5	50	3
		Females.....	453	107	-----	4	3	38	3
Midland.....	265	Total.....	208	135	13	6	1	43	-----
		Males.....	108	69	7	3	-----	23	-----
		Females.....	100	66	6	3	1	20	-----
Missaukee.....	168	Total.....	185	29	8	2	3	10	-----
		Males.....	102	17	5	1	3	6	-----
		Females.....	83	12	3	1	-----	4	-----
Monroe.....	603	Total.....	145	26	5	1	5	95	-----
		Males.....	85	10	5	1	3	60	-----
		Females.....	60	16	-----	-----	2	35	-----
Montcalm.....	545	Total.....	285	80	18	4	5	54	1
		Males.....	158	47	12	4	3	28	1
		Females.....	127	33	6	-----	2	26	-----
Montmorency..	58	Total.....	57	37	2	1	1	6	-----
		Males.....	30	16	1	1	1	4	-----
		Females.....	27	21	1	-----	-----	2	-----
Muskegon.....	770	Total.....	882	98	18	2	12	146	-----
		Males.....	480	55	12	1	7	77	-----
		Females.....	422	43	6	1	5	69	-----
Newaygo.....	331	Total.....	181	48	9	3	2	31	-----
		Males.....	96	26	6	1	2	16	-----
		Females.....	85	22	3	2	-----	15	-----
Oakland.....	522	Total.....	196	88	25	6	13	65	1
		Males.....	105	50	12	3	7	29	1
		Females.....	91	38	13	3	6	36	-----
Oceana.....	265	Total.....	118	40	4	-----	2	30	-----
		Males.....	63	23	3	-----	2	16	-----
		Females.....	55	17	1	-----	-----	14	-----
Ogemaw.....	55	Total.....	49	40	2	1	1	5	-----
		Males.....	26	19	2	1	1	3	-----
		Females.....	23	21	-----	-----	-----	2	-----
Ontonagon....	79	Total.....	48	26	2	-----	3	2	-----
		Males.....	32	18	2	-----	2	1	-----
		Females.....	16	8	-----	-----	1	1	-----
Osceola.....	371	Total.....	296	125	19	3	-----	71	-----
		Males.....	171	74	13	2	-----	37	-----
		Females.....	127	51	6	1	-----	34	-----
Oscoda.....	31	Total.....	16	13	1	-----	2	-----	-----
		Males.....	10	8	1	-----	1	-----	-----
		Females.....	6	5	-----	-----	1	-----	-----
Otsego.....	99	Total.....	101	36	2	-----	1	12	-----
		Males.....	51	18	1	-----	1	5	-----
		Females.....	50	18	1	-----	-----	7	-----
Ottawa.....	792	Total.....	692	28	11	2	13	65	12
		Males.....	362	14	4	2	10	32	6
		Females.....	330	14	7	-----	3	33	6

NATIONALITY OF PARENTS.

105

parents of children born in Michigan.

born parents, 1894.

Hol- land.	Bel- gium.	Switz- erland.	Nor- way.	Swe- den.	Den- mark.	Rus- sia, (Fin- land).	Hun- gary.	Bohe- mia.	Po- land.	France.	Italy.	All others.
2	1		18	105	62	38		6	26	5		
1	1		8	54	32	20		2	13	3		
1			10	51	30	18		4	13	2		
5		1	5	24	6	2			4			1
3			2	11	4	1			2			1
2		1	3	13	2	1			2			
1	11		10	113	10	8		5	5	2		451
1	7		4	61	5	4		2	3	1		230
	4		6	52	5	4		8	2	1		221
				3	2	4				1		
				2	1	2				1		
				1	1	2						
93		1	3	30	2	2				1		1
50		1	1	16		1				1		
43			2	14	2	1						1
	2							5	4	2		
	1							2	2	1		
	1							3	2	1		
1		1	6	5	109			1				
1		1	3	2	56							
			3	3	53			1				
				1	3				4			2
				1	2				2			2
					1							
152		3	83	201	28	5		1		9	1	123
81		1	40	100	17	8				4	1	61
71		2	43	101	11	2		1		5		62
46			4	21	10	4				2		1
23			2	11	5	2				2		
23			2	10	5	2						1
		1	1						1			
	1								1			
19	4			7	8	2						2
8	2			3	4	1						1
11	2			4	4	1						1
				2		13						
				2		7						
						6						
5		5		63	3	1				1		2
3		3		33	3	1				1		1
2		2		30								1
				2		2			46			
				2		1			23			
						1			23			
531			1	12	11				5			1
279				7	5				2			1
252			1	5	6				3			

Table 28.—CONCLUDED.—Nationalities of the foreign-born

Counties.	Total children born, 1894.	Sex of parents.	Total foreign-born parents, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
Presque Isle..	171	Total	215	17	2	1	3	160	-----
		Males	123	11	2	1	2	87	-----
		Females	92	6	-----	-----	1	73	-----
Roscommon ..	31	Total	27	14	1	-----	-----	6	-----
		Males	14	7	1	-----	-----	3	-----
		Females	13	7	-----	-----	-----	3	-----
Saginaw	1,866	Total	1,710	603	64	33	34	791	13
		Males	910	323	37	19	20	414	8
		Females	800	280	27	14	14	377	5
Sanilac	694	Total	778	599	28	9	16	110	-----
		Males	408	311	15	7	8	59	-----
		Females	370	288	13	2	8	51	-----
Schoolcraft....	194	Total	268	121	1	2	5	20	15
		Males	138	65	1	1	3	9	8
		Females	130	56	-----	1	2	11	7
Shiawassee....	433	Total	196	99	18	-----	2	59	-----
		Males	104	50	14	-----	2	32	-----
		Females	82	49	4	-----	-----	27	-----
St. Clair	997	Total	837	504	53	19	27	215	-----
		Males	442	252	34	12	15	120	-----
		Females	395	252	19	7	12	95	-----
St. Joseph....	297	Total	87	6	5	-----	1	73	-----
		Males	43	1	3	-----	-----	38	-----
		Females	44	5	2	-----	1	35	-----
Tuscola	489	Total	324	230	11	4	5	67	-----
		Males	169	118	8	2	3	34	-----
		Females	155	112	3	2	2	33	-----
Van Buren....	487	Total	85	19	3	2	3	49	-----
		Males	44	8	1	1	2	26	-----
		Females	41	11	2	1	1	23	-----
Washtenaw....	716	Total	385	75	26	1	15	255	-----
		Males	216	38	17	-----	11	142	-----
		Females	169	37	9	1	4	113	-----
Wayne	6,876	Total	8,159	1,252	354	133	823	4,898	151
		Males	4,358	615	206	83	164	2,654	76
		Females	3,801	637	148	50	159	2,244	75
Wexford	306	Total	232	51	3	5	3	20	-----
		Males	126	30	3	3	1	12	-----
		Females	106	21	-----	2	2	8	-----

NATIONALITY OF PARENTS.

107

parents of children born in Michigan.

born parents, 1894.

Hol- land.	Bel- gium.	Switz- erland.	Nor- way.	Swe- den.	Den- mark.	Rus- sia, (Fin- land).	Hun- gary.	Bohe- mia.	Po- land.	France.	Italy.	All others.
		1	2							1		28
		1	1							1		17
			1									11
									6			
									3			
									3			
		5	4	8	5	7		10	115	2	13	3
		4	2	5	3	3		4	58	1	7	2
		1	2	3	2	4		6	57	1	6	1
		4		2	4			1	4			1
		3			2			1	2			
		1		2	2				2			1
	2		17	71	2	10				1		1
	1		8	35	1	5						1
	1		9	36	1	5				1		
		1				4						
		1				2				3		
						2				3		
1		1	1	1		1				3	4	7
1			1							2	2	2
		1		1						1		5
2												
1												
1												
	1	1			1	2			2			
	1				1	1			1			
		1				1			1			
			2	2	1						1	
3			1	1	1						1	
2												
1												
						4				5	4	
						3				3	2	
						1				2	2	
27	65	31	6	10	19	136		37	598	26	76	15
15	39	17	3	6	12	74	2	19	309	15	41	8
12	26	14	3	4	7	62		18	229	11	35	7
6	2	1	6	116	14	5						
3	1		4	59	8	2						
3	1	1	2	57	6	3						

Table 29.—*Number of still-births, pairs of twins and illegitimate children born in Michigan during the year 1894, by counties.*

State and counties.	Number of still-births in 1894.*	Number of pairs of twins born in 1894.†	Number of illegitimate children born in 1894.‡	Counties.	Number of still-births in 1894.*	Number of pairs of twins born in 1894.†	Number of illegitimate children born in 1894.‡
State	1,002	428	355	Keweenaw	2	1	1
Alcona	4	—	—	Lake	3	2	—
Alger	2	—	1	Lapeer	11	4	3
Allegan	23	8	4	Leelanau	2	4	2
Alpena	9	7	1	Lenawee	8	10	6
Antrim	3	2	—	Livingston	4	2	—
Arenac	5	1	1	Luce	3	—	—
Baraga	1	2	—	Mackinac	3	2	2
Barry	10	4	5	Macomb	5	8	1
Bay	28	18	6	Manistee	19	5	4
Benzie	5	2	—	Manitou	5	—	—
Berrien	12	3	3	Marquette	30	7	7
Branch	9	7	1	Mason	10	5	2
Calhoun	16	6	3	Mecosta	13	5	3
Cass	8	1	2	Menominee	19	4	1
Charlevoix	4	2	1	Midland	9	3	3
Cheboygan	7	4	1	Missaukee	6	—	—
Chippewa	6	4	2	Monroe	15	9	3
Clare	—	3	—	Montcalm	13	7	4
Clinton	9	3	3	Montmorency	—	—	—
Crawford	4	2	—	Muskegon	20	9	3
Delta	6	1	—	Newaygo	5	2	4
Dickinson	23	9	5	Oakland	8	5	1
Eaton	11	8	3	Oceana	5	3	2
Emmet	3	2	9	Ogemaw	—	—	—
Genesee	18	5	2	Ontonagon	10	2	1
Gladwin	—	—	—	Oscoda	8	5	2
Gogebic	6	2	1	Oscoda	—	—	—
Grand Traverse	10	5	3	Otsego	5	1	1
Gratiot	6	6	4	Ottawa	24	8	4
Hillsdale	3	3	—	Fresque Isle	2	—	1
Houghton	34	12	13	Rosecommon	—	—	—
Huron	12	8	8	Saginaw	56	15	12
Ingham	22	6	5	Sanilac	8	9	2
Ionia	9	6	1	Schoolcraft	3	2	—
Iosco	8	3	1	Shiawassee	1	2	2
Iron	—	2	—	St. Clair	20	7	6
Isabella	4	7	2	St. Joseph	9	3	—
Jackson	28	15	3	Tuscola	6	7	3
Kalamazoo	14	7	9	Van Buren	17	3	2
Kalkaska	1	1	—	Washtenaw	23	5	1
Kent	59	20	30	Wayne	142	52	132
				Wexford	10	3	1

* Includes 4 males, 3 females, 1 unknown sex, black; 3 females, mulatto; 12 unknown sex, unknown color; also 11 pairs of male twins; 13½ pairs of female twins, and 2¼ pairs of twins, one of each sex; also 2 males, 2 females, and 1 unknown sex, illegitimate.

† Includes 1 pair black twins, and 2 pairs male, 1 pair 1 of each sex, illegitimate twins.

‡ Includes 1 male, black; 1 female, mulatto; 2 males and 4 females, Indian, and 1 female, halfbreed.

STILL-BIRTHS, TWINS AND ILLEGITIMATES, 1885-1894.

Table 30 compares the number of still-births, twins and illegitimates registered for each of ten years past with the total numbers of births registered in each year. In round numbers, out of every hundred children born in Michigan, two are still-born, two are twins, and one is illegitimate. The latter rate is very low. The following figures from various sources, quoted on the authority of the *Victorian Year-Book*, 1894, p. 296, sufficiently indicate this fact:

Illegitimacy in various countries.

Country.	Illegitimate births per 100 children born.	Country.	Illegitimate births per 100 children born.
Austria	14.7	England	4.7
Bavaria	13.9	Switzerland	4.6
Saxony	12.7	New South Wales	4.6
Sweden	10.2	Victoria	4.6
Denmark	9.6	Western Australia	4.2
German Empire	9.3	Queensland	4.2
Belgium	8.7	Tasmania	4.0
Hungary	8.4	Poland (Russian, 1888)	3.7
Scotland	8.2	Holland	3.2
Norway	8.1	Ireland	2.8
France	8.1	New Zealand	2.8
Prussia	8.1	Russia (European, 1888)	2.6
Italy	6.8	South Australia	2.6
Portugal	5.6	Greece	1.6
Spain	5.5	Michigan, 1885-94 .....	.9

Table 30.—*The relation of still-born, twin and illegitimate children to total births returned, for the years 1885-94, and the average for the ten-year period. Also the number of pairs of twins and cases of triplets in each year.*

Years.	All children born.	Still-births.		Twins.		Illegitimate.		Pairs of twins.	Cases of triplets.
		Number	Per 1,000 births.	Number	Per 1,000 births.	Number	Per 1,000 births.		
1885	42,119	1,008	23.9	962	22.8	248	5.9	481	7
1886	41,095	909	22.1	1,002	24.4	300	7.3	501	6
1887	46,226	897	19.4	1,066	22.8	422	9.1	528	5
1888	48,952	1,358	27.7	1,170	23.9	591	12.1	583	8
1889	49,272	1,202	24.4	1,054	21.4	421	8.5	527	6
1890	52,306	1,397	26.7	1,542	29.5	455	8.7	771	6
1891	50,812	1,090	21.5	1,354	26.6	389	7.7	677	7
1892	46,221	1,014	21.9	1,114	24.1	405	8.8	557	6
1893	47,722	1,019	21.4	986	20.7	505	10.6	493	3
1894	44,596	1,002	22.5	856	19.2	355	8.0	428	8
Average, 1885-94.	46,932	1,090	23.2	1,110	23.7	409	8.7	555	6

TRIPLETS.—There were eight cases of triplets recorded for 1894, as follows: Cass county, January, 1 male, 2 females, parents both native; Huron county, February and August, all females and of foreign-born parents; Iocoo, June, 2 males, 1 female, foreign father and native mother; Kalamazoo, June, all males, foreign parents; Manistee, October, 2 males, 1 female, native parents; Muskegon, December, all males, native parents; St. Clair, March, all females, native parents. All were born of white parents.

STILL-BIRTHS, TWINS AND ILLEGITIMATES BY MONTHS.

The months of birth of still-births, twin children and illegitimates may be readily compared in Table 31. This Table is affected, probably in the same proportion as the total number of births, by omissions in the early months of the year due to the greater lapse of time before registration, but the relative numbers of births of each class in any month may probably be taken as correctly represented.

Table 31.—*Exhibiting, by sex and months, the number of still-born, twin and illegitimate children returned in Michigan for the year 1894.*

Condition.	Sex.	Year 1894.	Months of birth, 1894.											
			Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Still-births..	Total	1,002	73	64	85	89	98	82	76	82	64	78	105	106
	Males	549	41	33	53	43	56	46	40	47	34	41	54	61
	Females	402	26	26	29	43	38	32	31	31	25	33	49	39
	Unknown	51	6	5	3	3	4	4	5	4	5	4	2	6
Twins *	Total	856	58	60	70	76	62	48	90	68	94	68	78	84
	Males	448	28	36	27	43	26	27	45	40	48	36	48	46
	Females	408	32	24	43	33	36	21	45	28	46	32	30	38
	Unknown													
Illegitimates	Total	355	15	22	30	34	37	43	28	22	22	37	33	34
	Males	164	6	13	14	11	21	20	13	8	6	19	17	16
	Females	188	8	9	16	23	16	22	13	14	16	18	16	17
	Unknown	3	1					1						1

* The total number of twin children, i. e. twice the number of pairs of twins. Triplets are not included.

STILL-BIRTHS, TWINS AND ILLEGITIMATES BY PARENT-NATIVITY.

In Table 32 the parent-nativities of still-born, twin and illegitimate children are compared for the year 1894, sex being specified in each case. In ordinary years foreign-born parents show a slight excess in the proportion of still-born children, and rather a marked excess in the proportion of twins. In 1893, owing to the great reduction in the proportion of births to foreign-born parents, the native-born parents of still-births were in excess for the first time in many years, while foreign-born parents of twins only slightly exceeded the native-born. The same relation continued for 1894, and was shown in even more marked degree. The native-born parents exceeded the foreign-born in all three special classes of births. This probably does not arise from any greater tendency to immorality on the part of the native white population of the State, but simply from the fact that under the term "native" are included the black, mulatto and Indian inhabitants, for all of which classes the illegitimate birth-rate is high.

RATIOS OF THE SEXES IN CHILDREN BORN ALIVE, STILL-BORN, ETC.

In Table 33 it is shown that about 108 males are born alive for every 100 females; this is the result of the experience of ten years. For 1894 the ratio was identical. The proportion of males in twin and illegitimate births is smaller, females being in excess among illegitimates as a rule, to which, however, the year 1893 formed an exception. Still-births, on the contrary, show a great excess of males, in explanation of which the added dangers during delivery incident to the larger size of the head in male infants may be referred to.

Table 32.—Parent-nativity of still-born, twin and illegitimate children returned in Michigan for the year 1894.

Nativity of parents.	Number of still-born children, 1894.				Number of pairs of twins, 1894.				Number of illegitimate children, 1894.			
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	One of each.	Total.	Males.	Females.	Unknown.
All nativities.....	1,002	549	402	51	428	151	131	146	355	164	188	3
Both native-born.....	425	235	169	21	203	86	53	64	83	38	44	1
Both foreign-born.....	306	164	127	15	144	42	47	55	20	12	8	---
Foreign father and native mother.....	102	60	37	5	50	7	24	19	8	2	6	---
Foreign mother and native father.....	52	28	20	4	21	11	4	6	7	3	4	---
Unknown mother, father native.....	9	4	4	1	5	3	1	1	2	---	2	---
Unknown mother, father foreign.....	8	5	3	---	---	---	---	---	1	---	1	---
Unknown father, mother native.....	4	2	2	---	1	1	---	---	105	52	52	1
Unknown father, mother foreign.....	4	3	1	---	---	---	---	---	32	14	18	---
Both unknown.....	92	48	39	5	4	1	2	1	97	43	53	1
One or both native*.....	592	329	232	31	280	108	82	90	205	95	108	2
One or both foreign*.....	472	280	188	24	215	60	75	80	68	31	37	---

* Including cases in which nativity of either parent is unknown.

Table 33.—Exhibiting the proportion of males to females among children born alive, still-births, twins and illegitimates in Michigan during the years 1885-94, with average for the ten-year period.

Years.	Children born alive.				Still-births.				Twins.				Illegitimates.			
	Males.	Females.	Unknown.	Males per 100 females.	Males.	Females.	Unknown.	Males per 100 females.	Males.	Females.	Unknown.	Males per 100 females.	Males.	Females.	Unknown.	Males per 100 females.
1885.....	21,084	19,994	33	105	606	372	30	163	468	490	4	96	115	129	4	89
1886.....	20,832	19,334	20	108	500	366	43	137	486	514	2	95	151	146	3	103
1887.....	22,523	21,771	35	108	503	359	35	140	575	481	---	120	196	224	2	88
1888.....	24,717	22,867	10	108	809	534	15	151	617	549	---	112	293	298	---	98
1889.....	24,950	23,099	21	108	692	483	27	143	547	507	---	107	200	219	2	91
1890.....	26,766	24,100	43	111	757	587	58	129	720	816	6	88	232	217	6	107
1891.....	25,856	23,812	54	109	583	434	73	134	637	711	6	90	174	204	11	85
1892.....	23,551	21,621	35	109	597	374	43	160	553	559	2	99	191	206	8	93
1893.....	24,162	22,511	30	107	572	398	49	144	490	486	10	101	278	227	---	122
1894.....	22,604	20,976	14	108	549	402	51	136	448	408	---	110	164	188	3	87
Average, 1885-94.....	23,805	22,009	30	108	617	431	42	143	554	552	3	100	199	206	4	97

* Twin children, i. e., twice the number of pairs of twins born; triplets not included.

PARENT-NATIVITY OF PLURAL BIRTHS, 1885-1894.

Table 34 shows the variations in the proportions of plural births of each nativity for the past ten years. The marked increase in the percentage of twin children born of native-born parents, with the corresponding decrease in the percentage of foreign-born parents of twins, is for the most part merely an accompaniment of the general change in the proportions of parents of all children by nativity. It cannot be said that the proportion of plural births to foreign-born parents has diminished to a greater degree than the general foreign birth-rate.

Table 34.—*Exhibiting the parent-nativity of plural births* in Michigan for the ten years 1885-94, inclusive.*

Years.	Total.	Native-born.		Foreign-born.		Mixed.		Unknown.	
		Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
1885.....	983	384	39.1	414	42.1	155	15.8	30	3.1
1886.....	1,020	419	41.1	407	40.0	176	17.3	18	1.8
1887.....	1,071	448	41.8	423	39.5	168	15.7	32	3.0
1888.....	1,194	485	40.6	530	44.4	159	13.3	20	1.7
1889.....	1,072	410	38.3	486	45.3	172	16.0	4	.4
1890.....	1,561	437	28.0	904	57.9	200	12.8	20	1.3
1891.....	1,375	434	31.6	746	54.3	173	12.6	22	1.6
1892.....	1,132	418	36.9	472	41.7	212	18.7	30	2.7
1893.....	995	397	39.8	418	42.1	150	15.1	30	3.0
1894.....	880	418	47.5	297	33.8	145	16.5	20	2.3
Average, 1885-94.....	1,128	425	37.7	510	45.2	171	15.2	23	2.0

* Triplets included.

Table 35.—*Exhibiting the parent-nativity of the mothers of illegitimates in Michigan for the years 1885-94, inclusive.*

Years.	Mothers of illegitimate children.						
	Total.	Native.		Foreign.		Unknown.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1885.....	248	115	46.4	86	34.7	47	18.9
1886.....	300	142	47.3	45	15.0	113	36.7
1887.....	422	151	35.8	72	17.1	199	47.2
1888.....	591	149	25.2	72	12.2	370	62.6
1889.....	419	126	30.1	73	17.4	220	52.5
1890.....	450	148	32.9	73	16.2	229	50.9
1891.....	386	143	37.1	66	17.1	177	45.8
1892.....	405	163	40.2	71	17.5	171	42.2
1893.....	501	223	44.5	111	22.2	167	33.3
1894.....	352	194	55.1	58	16.5	100	28.4
Average, 1885-94.....	407	155	38.1	73	17.9	179	44.0

NATIVITY OF MOTHERS OF ILLEGITIMATES, 1885-1894.

In a similar manner the statistics of illegitimacy in the State are compared for sis of the births and marriages grouped into one item (that of the "foreign-born"), ing that births of this class are subject to many inaccuracies and irregularities of return. The great increase in the proportion of native-born mothers for the year 1894 is probably due to the general falling off in the foreign birth-rate. The increase in the proportions both of native-born and foreign-born mothers of illegitimates in recent years, appears to be partly due to the greater care in specifying nativity, and a consequent reduction of the ratio of mothers of "unknown" nativity.

FECUNDITY OF MARRIAGE AND FERTILITY OF WOMEN OF CHILD-BEARING AGE IN MICHIGAN BY NATIVITY.

Marriage being the great institution by which the population is chiefly regulated, it becomes necessary to consider the conditions regulating the fertility of marriage. The two most important of these are the duration of married life, and the age at which marriage is contracted by women.—Newsholme, *Vital Statistics*, p. 50.

While a very important subject in sociology, the fruitfulness of marriage, with the factors tending to the increase or diminution thereof, is confessedly a very difficult one. This is especially true of the United States in general, and of Michigan in particular, for the necessary data respecting births are not collected, on the one hand, with sufficient accuracy, and on the other hand many marriages of our foreign-born inhabitants have been performed before their arrival in this country. Add to this that in recent years in Michigan probably more young married couples of native birth have left the State than have entered it from other states, thereby diminishing the native birth-rates, and it is evident that any exact comparison of fecundity of marriage by nativity is out of the question.

It may not be wholly in vain, however, to present what evidence there is now accessible on the subject as derived from our present system of vital statistics, with the hope that it may indicate certain directions in which these statistics should be improved, and even, perhaps, suggest certain conclusions that more careful study, based upon more perfect data, will in some measure confirm. Absolutely reliable data are very desirable in vital statistics, as absolutely chemically pure reagents are desirable in chemistry for the purpose of exact analysis, but in both branches of science, in default of the best materials, very good results may be achieved with imperfect ones, if only unusual pains be taken to eliminate the sources of error.

FECUNDITY AND FERTILITY DEFINED.

The words fecundity and fertility are used synonymously by most writers on vital statistics, and are applied both to the fruitfulness of marriages and of women of child-bearing age. It seems best for the sake of clearness in the present discussion to invariably designate the fruitfulness of marriage as fecundity, and the fruitfulness of women of child-bearing age as fertility. In general, letting W represent the number of women of child-bearing age, M the number of marriages, O the number of children born, F the fecundity, and F' the fertility, we shall have—

$$F = \frac{O}{M}; \text{ and } F' = \frac{O \times 1,000}{W},$$

the latter ratio being expressed as a rate per 1,000. There are other ratios employed for such comparisons, the most common of which is the gross birth-rate, *i. e.*, the rate per 1,000 of total births to the aggregate population of both sexes. Since the age and sex distributions of the populations of different communities

vary widely, it is evident that comparison of the crude birth-rates may lead to gross errors. Again, the ratio may be based upon the total female population of the community, but this comparison is hardly less objectionable, since the age distribution is left out of account. Indeed, the formulas given above for the ratios of fecundity and fertility require certain additional limitations in order to secure the best results.

In the formula for fecundity of marriage, $F = \frac{C}{M}$, the number of children, C , should comprise only the legitimate children, unless, as in Michigan, the illegitimate birth-rate is so low as to inappreciably affect the result. The question as to what marriages shall be compared with the births of a given year is more difficult, several different methods being in use by statisticians. Dr. Farr says on this point: "The marriages in a calendar year give rise to births which are registered year after year for 20 years. The births to the marriages in a given year could only be determined by following the families and counting all the children unto the end. The division of the sum of the children by the marriages would accurately press the fecundity, as it has been called, of marriages. If the annual marriages do not increase or decrease in number through a series of years, the division of the annual births by the annual marriages of the same years expresses the fecundity pretty accurately; but when the marriages are increasing rapidly, the births must be divided by the marriages of some earlier year in order to get an approximation to the fecundity. The interval between the mean age at marriage and the mean age of mothers when their children are born would indicate the calendar years with which the births of a given year should be compared."*

MEAN PERIOD OF FECUNDITY.

Dr. Farr possessed no data in regard to this interval for England, and in his calculations employed the interval derived from the Swedish vital statistics, which was about six years (more accurately, 5.9 years). In calculating the fecundity of a given year he did not compare the births registered with the marriages registered for the sixth year preceding, but instead used the mean of the marriages for the fifth, sixth and seventh years preceding, thereby securing a basis less liable to accidental fluctuations. It would be still better to compare the quinquennial average of births with the quinquennial average of marriages for a period preceding that taken for births by the mean interval of child-bearing. We are fortunate in knowing what this period is in Michigan, at least what it was in 1884; constants† of this character change slowly, so that the interval ascertained for 1884 is probably substantially correct at present. The State census of 1884 ascertained the ages of mothers in its enumeration of births for the year 1883-84, and from the table showing their distribution, by nativity,‡ the following average ages of mothers have been computed. The average ages of persons married, by nativity, are stated in the Registration Report of each year, and present little annual variation, as shown by their nearness to the means of the preceding ten-year periods. By subtracting the

* Dr. Farr, Memorial Volume of Vital Statistics, p. 93. The meaning of the term "fecundity" as employed in this quotation from Dr. Farr, will be seen to be substantially the same as it is defined for the purpose of the present paper. The looseness with which the expressions "fertility" and "fecundity" are used in ordinary conversation seemed to make some attempt at definition desirable for the special purpose of this investigation. It may be noted that Professor Tait, in the mathematical discussion of the subject included in Dr. Mathews Duncan's work, "Fecundity, Fertility and Sterility," has otherwise defined the terms in accordance with his special purpose:

"By *fecundity* at a given age, we mean the probability that during the lapse of one year of married life, at that age, pregnancy, producing a viable child, will ensue.

"By *fertility*, at any age, we mean the number of children which a married woman of that age is likely to have during the rest of her life, or some numerical multiple of it."

† That is, a relative constant. There are few absolute constants in vital statistics.

‡ Census of Michigan, 1884. Vol. 1, p. clxx.

average ages at marriage from the averages ages of mothers we obtain the average duration of marriage to the birth of the mean child:

	Average ages in years.		
	All nativities.	Native- born.	Foreign- born.
Mothers of children born in Michigan during the census year, 1883-84	28.97	28.22	30.19
Brides married in Michigan during the year 1894.....	28.40	22.96	24.44
Average duration of marriage to birth of mean child.....	5.57	5.26	5.75

The results are seen to be not materially different from the interval determined for Sweden. For convenience, comparison of births may well be made with the marriages of the preceding five-year period, and with little sacrifice of accuracy.

Again in discussing the formula for fertility, $F' = \frac{1,000 C}{W}$, it is essential to deter-

mine (a) whether still-births shall be included or excluded; (b) what period of age shall be selected as the "child-bearing age;" and (c) whether special comparison of legitimate births or total births to the number of married women of the child-bearing age be necessary. In the present report, still-births are included in the number of births, and properly so in connection with the discussion of this subject—fertility. The child-bearing age is understood to be from the years 15 to 44, both inclusive; although females cannot be married in Michigan under the age of sixteen years, and comparatively few marriages occur before the bride attains the age of eighteen, this division is convenient and has been extensively adopted in similar discussions. It would be better, perhaps, to select the ages from 20 to 39, inclusive, or to carry on the discussion by quinquennial or decennial periods of age. As to the ratios based upon the number of married women of child-bearing age in this State, no census data have been tabulated to serve as a basis for such discussion until the census of 1890, and the results for that year cannot, of course, be applied to more than a few years preceding and following 1890.

COURSE OF FECUNDITY AND FERTILITY IN MICHIGAN.

In Table 36 the numbers of women of each nativity at child-bearing age (15-44) are given for each year from 1870 to 1894, inclusive, those for the intercensus years being interpolated in arithmetical series.* From the registration reports for the corresponding years the numbers of children born to mothers of each nativity and the numbers of persons married of each nativity have been inserted, and the rates per 1,000 calculated upon the basis of population mentioned. Lastly, the ratios of children to marriages of the same year have been given for each nativity, as a rough measure of the fecundity of marriage.

The table as presented requires several corrections in order to truthfully represent the facts. It is known that the returns of births from Detroit were unlawfully increased for several years (1887-91), probably to such an amount that a deduction of about 10 per cent from the total number returned for the State for those years would be necessary in order to render the births comparable with other years.† Again, after making allowance for exceptional fluctuations, it is known that the returns of births are deficient year after year in this State, and probably to

* This is more accurate for the conditions of increase of population obtaining in Michigan than geometrical interpolation.

† See foot-note on p. 19.

the extent of no less than 60 per cent of the number returned. That is, the number of births returned for any given year should be increased by about 60 per cent to represent the true number that occurred. Whether the returns fluctuate in accuracy from year to year to any marked degree cannot be known; we can only make use of them at all for the purpose of comparing successive years under the hypothesis that they do not so fluctuate, or that the fluctuations are small in amount. The five years, 1887-91, are exceptions to this statement, as mentioned above, for in them we know that the fluctuations due to variations in the accuracy of registration were so great as to require special correction.

Table 36.—*Comparative fertility and frequency of marriage of native-born and foreign-born women of child-bearing age in Michigan for the years 1870-94, together with the fecundity of marriages, by nativity, for the same years.*

Years.	Women aged 15-44 years.		Children born to mothers—		Children born per 1,000 women aged 15-44.		Women married.		Women married per 1,000 women aged 15-44.		Children born per marriage, with mother—	
	Native-born.	Foreign-born.	Native-born.	Foreign-born.	Native-born.	Foreign-born.	Native-born.	Foreign-born.	Native-born.	Foreign-born.	Native-born.	Foreign-born.
1870 ..	191,541	74,726	14,641	9,929	76.4	132.9	6,590	2,258	34.4	30.2	2.2	4.4
1871....	193,011	77,269	13,648	10,257	68.6	132.7	7,233	2,591	36.3	33.5	1.9	4.0
1872....	206,480	79,812	15,643	11,169	75.8	139.9	7,112	2,471	34.4	31.0	2.2	4.5
1873....	213,950	82,355	19,769	14,033	92.4	170.4	7,475	2,901	34.9	35.2	2.6	4.8
1874....	221,419	84,898	16,665	12,394	75.3	146.0	7,984	2,841	36.1	33.5	2.1	4.4
1875....	228,889	87,442	17,686	12,961	77.3	148.2	8,267	2,599	36.1	29.7	2.1	5.0
1876....	236,358	89,985	19,347	13,853	81.9	153.9	8,249	2,401	34.9	28.7	2.4	5.8
1877....	243,828	92,528	19,098	13,599	78.3	147.0	8,443	2,375	34.6	25.7	2.3	5.7
1878....	251,297	95,071	20,389	14,032	81.1	147.6	9,490	2,501	37.8	26.3	2.2	5.6
1879....	258,767	97,614	20,024	13,492	77.4	138.2	10,324	2,675	39.9	27.4	1.9	5.0
1880 ..	266,236	100,157	20,436	14,115	76.8	140.9	10,672	3,219	40.1	32.1	1.9	4.4
1881....	272,654	106,461	20,225	13,765	74.2	129.8	10,735	3,890	39.4	36.5	1.9	3.5
1882....	279,071	112,765	20,732	15,461	74.3	137.1	11,451	4,590	41.0	40.7	1.8	3.4
1883....	285,489	119,069	22,587	17,345	79.1	145.7	11,431	4,816	40.0	40.4	2.0	3.6
1884 ..	291,906	125,373	22,159	17,389	75.9	138.7	10,439	4,402	35.8	35.1	2.1	4.0
1885....	299,480	127,426	22,837	18,386	76.3	144.3	10,728	4,145	35.8	32.5	2.1	4.4
1886....	307,053	129,478	22,267	17,939	72.5	138.5	11,885	4,578	38.7	35.4	1.9	3.9
1887....	314,627	131,531	25,157	20,174	80.0	153.4	11,919	4,899	37.9	37.2	2.1	4.1
1888....	322,201	133,583	26,876	20,856	83.4	156.1	11,805	5,049	36.6	37.8	2.3	4.1
1889....	329,774	135,636	26,039	22,238	78.9	164.0	12,690	5,165	38.5	38.1	2.1	4.3
1890 ..	337,348	137,688	27,756	23,331	82.3	169.4	12,929	5,231	38.3	38.0	2.1	4.5
1891....	343,973	140,712	26,048	23,483	75.7	166.9	13,336	5,390	38.8	38.3	2.0	4.4
1892....	350,597	143,737	23,699	21,362	67.6	149.6	13,998	5,619	39.9	39.1	1.7	3.8
1893....	357,222	146,761	25,118	21,605	70.3	147.2	13,616	5,079	38.1	34.6	1.8	4.3
1894 ..	363,846	149,785	24,481	18,957	67.3	126.6	13,256	4,482	36.4	29.9	1.8	4.2

Census years in bold face; still-births included in births. Unknown nativity of mothers and brides excluded.

These corrections of births are necessary absolutely, that is to give correct rates with reference to population, and also with reference to marriages, with which the number of births has to be compared for the establishment of the ratio of fecundity. It may be assumed that the returns of marriages are correct in Michigan for each year of registration. They have been entirely so since the establishment of the license system in 1887, and were subject to a very slight percentage of loss, as compared with the statistics of births and deaths, prior to that time.

Another slight correction of the rates given in Table 36 is needed, from the fact that a small proportion of mothers of children born and of women married is compiled as "unknown" nativity. From Tables 24 and 47 the amount of this deficiency may be estimated, which is so small, being probably about 2.5 per cent of the aggregate, that it may be safely neglected. Moreover, as it affects births and marriages in about the same degree, it disappears as a factor of the fecundity of marriage.

In Table 37 the net effect of these corrections is shown, and also, by reducing the individual years to groups of five-year periods, examination of the general tendency of registration may be more conveniently made. It appears that while the frequency of marriage is approximately the same for native-born and foreign-born women of the selected periods of age, there are nearly twice as many children born of foreign-born mothers as of native-born mothers in proportion to the total number of women of suitable age of each nativity; and that year by year somewhat more than twice as many children having foreign-born mothers are born per each foreign-born woman married as there are children born having native-born mothers per each native-born woman married. This latter comparison, of course, is only approximate, for, as shown in the beginning of this discussion, fecundity should compare the births of any given year with the marriages of a previous period.

Table 37.—*Showing, by five-year periods, with corrections for imperfect returns, the relative fertility, frequency of marriage and fecundity of marriage of native-born and foreign-born women in Michigan, 1870-94.*

Five-year periods.	Children born per 1,000 women aged 15-44 years.		Women married per 1,000 women aged 15-44.		Children born per marriage, with mother—	
	Native.	Foreign.	Native.	Foreign.	Native.	Foreign.
1870-74.....	77.7	144.4	35.2	32.7	2.2	4.4
1875-79.....	79.2	147.0	36.7	27.2	2.2	5.4
1880-84.....	76.1	138.3	39.3	37.0	1.9	3.8
1885-89.....	*73.4	*141.8	37.5	36.2	*2.0	*3.9
1890-94.....	*69.5	*145.0	38.3	36.0	*1.8	*4.1

The above increased by 60 per cent for omissions—

1870-74.....	124.3	231.0	-----	-----	3.5	7.0
1875-79.....	126.7	235.2	-----	-----	3.5	8.6
1880-84.....	121.8	221.3	-----	-----	3.0	6.1
1885-89.....	*117.4	*226.9	-----	-----	*3.2	*6.2
1890-94.....	*111.2	*232.0	-----	-----	*2.9	*6.6

* Corrected approximately for fraudulent returns of births from Detroit by subtraction of 10 per cent of the rates given in Table 36 for each of the years 1887-91. See note on p. 19.

While the table shows that the frequency of marriage is approximately the same for native-born and foreign-born women, it must be remembered that only the marriages solemnized in Michigan are referred to. Many foreign-born women were married in the countries of their birth, and entered Michigan subsequently. No statistics of civil condition, by nativity and periods of age, are obtainable until the last United States census, according to which there were in Michigan, in 1890, 137,688 foreign-born females between the ages of 15 and 44, of which number 98,763, or 71.7 per cent. were married. Of the 337,348 native-born females in Michigan of the same period of age in 1890, only 189,519, or 56.2 per cent, were married. So the apparent equality of the frequency of marriage, by nativity, may merely mean that the marriage-rate of native women is about the same as the marriage-rate of foreign-born women as based on marriages actually performed in this State, but to which a very considerable increment is required to correctly express the true marriage-rate of the foreign-born women resident in Michigan.

It follows from the greater proportion of married women of reproductive age among the foreign-born inhabitants of the State, that if fertility were based upon that class, a more favorable showing would be made, comparatively, for the native-born women. Instead of the ratios 111.2 and 232.0, respectively, as given in Table 37, for the five-year period 1890-94, the children born per 1,000 native-born married women of ages from 15 to 44, would be 197.9, and the corresponding birth-rate per 1,000 foreign-born married women aged 15 to 44 would be 323.6. But the additional limitation as to civil condition is not properly imposed in stating the fertility, for marriage is readily entered into in Michigan, and its avoidance or postponement, both factors of diminished child-bearing, may be regarded merely as preliminary phenomena relating to the fertility of the women of the two nativities.

For fecundity of marriage, however, this correction is not only admissible but is absolutely required. It is evident in Table 36 that the fecundity of the marriages of foreign-born women is overstated, since the marriages contracted before arrival in this country are omitted. Taking, for example, the year 1890, we may consider what the marriage-rate of foreign-born women there given, 38.0 per 1,000, would become under the hypothesis that this rate should bear the same relation to the marriage-rate of native-born women, 38.3 per 1,000, as the ratios of married women to the total number of women of each nativity aged from 15 to 44 would indicate. We have the proportion—

$$56.2 : 71.7 :: 38.3 : x = 48.9.$$

Using this marriage-rate and the number of foreign-born women in Michigan in 1890 at the selected age-period as a basis, there would have been 6,733 foreign-born women married during the year, instead of 5,231, and the number of children born per marriage would become 3.5, instead of 4.5. This would indicate a reduction of at least 20 per cent in the rates given for the fecundity of foreign marriages in Tables 36 and 37 as compared with the corresponding rates for the fecundity of native marriages. It is needless to say that such a correction is only a very loose approximation, and of value chiefly as indicating the nature of the errors to which such an investigation as the present is necessarily liable from the employment of imperfect data.

We may sum up the results of all these attempts at securing the true figures for fecundity of marriage, by nativity, in Michigan in Table 38, which, it is believed, fairly represents the truth. The general decline in the rates for both nativities in recent years is probably true, and the relative rates of the two nativities cannot be

very wide of the mark. It will be of interest to insert in connection with this showing a statement of the numbers of children born per marriage in various European countries and Australian colonies, as given in the *Victorian Year-Book*, 1894, page 300; the figures for Victoria and possibly for the other Australian colonies are obtained by dividing the births of a given year by the marriages of the preceding year, and there are probably other differences of method in calculating the results, so that the comparisons can be general only. The figures are generally for a series of years, and the countries having the higher averages are placed first in order.

Table 38.—*Showing by nativity, as far as the present data permit, the true fecundity of marriage in Michigan.**

Five-year periods.	Children born per marriage, with mother—	
	Native-born.	Foreign-born.
1875-79.....	3.6	5.8
1880-84.....	3.3	6.5
1885-89.....	3.0	4.9
1890-94.....	3.0	5.1

* For convenience, the rates of children born as given in Table 37, with corrections, are compared with the marriage-rates in the same table for the *preceding* quinquennial period. The fecundity of the foreign marriages thus obtained is reduced uniformly by 20 per cent as a reasonable correction for marriages prior to arrival in this country.

Children to a marriage in various countries.

Country.	Children to each marriage.	Country.	Children to each marriage.
Russia in Europe (1888).....	5.7	Italy.....	4.6
Ireland.....	5.5	Scotland.....	4.4
New Zealand.....	5.2	Holland.....	4.3
Finland (1887).....	5.0	Victoria.....	4.2
Russian Poland (1888).....	4.9	Belgium.....	4.2
Western Australia.....	4.8	England.....	4.2
Tasmania.....	4.7	Sweden.....	4.0
New South Wales.....	4.7	Denmark.....	3.6
South Australia.....	4.7	Japan (1888-91).....	3.5
Queensland.....	4.6	France.....	3.0

PRESENT RATE OF INCREASE OF NATIVE POPULATION IN MICHIGAN.

According to this comparison, the fecundity of native marriages in Michigan has declined until it is about the same as that of France, which is characterized by a nearly stationary population. It is difficult to decide whether the native-born population of Michigan has ceased to increase, is actually decreasing, or is still increasing at a very low rate of annual increase. We cannot take the number of native-born persons by each census enumeration, and from the differences calculate the

rate of increase of the native-born, since all children of foreigners are classed among the native-born, and this element is largely responsible for the apparent increase of this class of the population.* It would be of the greatest assistance if the returns of births should specify the nativity of the grandparents of all children born, instead of merely the birthplaces of fathers and mothers as at present. The last State census obtained such data,† and among the valuable conclusions deduced therefrom, which appear corroborative of the results reached by the present study, are the following:

"Of the 53,228 children tabulated, the parents and grandparents of 10,880 were all native, and the parents and grandparents of 20,080 were all foreign-born. The former number is 1.20 per cent of the native inhabitants with native parents, and the latter is 3.72 per cent of the foreign-born with foreign-born parents. The latter number is 1.85 times the former.

"In other words, though the number of native inhabitants with native parents is 1.67 times the foreign-born with foreign-born parents, yet the number of children born whose parents and grandparents were all foreign-born is nearly twice the number born whose parents and grandparents were all native.

"In one thousand foreign-born in the State, the number who become parents is two and one-half times the number in one thousand native.

"The absolute number of children born in the State whose parents and grandparents are all foreign-born is nearly double the number born whose parents and grandparents are all native.

"A larger proportion both of the native population of native parentage, and of the foreign-born of foreign parentage, become parents in localities where the population is largely foreign, than in localities where it is largely native."

* Such a calculation is of interest, however, in clearly showing that the rate of increase of the native-born inhabitants of Michigan has greatly declined in recent years. The figures are as follows, the rates given, of course, being calculated geometrically:

Census years.	Native-born population.	Increase through decennial census periods.		Annual increase,—rate per 1,000.
		Number.	Per cent.	
1850.....	342,951			
1860.....	600,020	257,069	74.96	57.5
1870.....	916,049	316,029	52.67	43.2
1880.....	1,248,429	332,380	36.28	31.4
1890.....	1,550,009	301,580	24.16	21.9
1894.....	1,670,797			18.9

The United States census of 1890 reported 917,693 inhabitants of Michigan as "native whites, with native parents." There were 21,003 colored persons, at least three-fourths of whom were born of native parents. This gives a total of about 938,696 native inhabitants with native parents in Michigan in the year 1890. The State census of 1894 reported only 904,881 native inhabitants with native parents, thus showing a decrease of 33,815 in the four-year period, or an average loss of 7,142 per annum.

† Census of Michigan, Bulletin No. 8. Births by sex, color, parent-nativity, and grandparent-nativity.

FECUNDITY BY NATIONALITY.

Finally, in Table 39, certain additional light is thrown on the subject by an analysis of the births and marriages grouped into one item (that of the "foreign-born"), in the preceding discussion into their constituent nationalities. The figures in this table result from a comparison of Tables 26 and 50, item by item, rejecting, however, such as appear to be too small numerically to yield results of value. The table as a whole represents only the year 1894, no compilation by nationality having ever been made hitherto in these reports, and so corresponds to the last line of Table 36. No corrections are practicable for imperfect returns or for marriages contracted prior to arrival in this State, but the data should be taken merely for what they are worth, as affording a rough means of comparing the fecundity of different nationalities, and of different combinations of nationalities. If this table be continued for a series of years, some valuable results may be ultimately reached; but from the nature of the case and the small numbers involved in certain instances it is evident that implicit reliance cannot be placed upon the indications of a single year.

One of the most interesting features is the fact, which seems to be clearly brought out, that an intermarriage of either an American male or an American female with a foreigner, depresses the fecundity to the American standard. Thus the fecundity of marriages between persons both of native birth is 1.8; between Canadians is 4.9. The fecundity of American males and Canadian females is 1.9, and of Canadian males and American females is also 1.9, in both cases much closer to the American than to the Canadian rate. Another instance: the fecundity of Germans is 6.7; of native males and German females, 2.3; and of German males and native females, 2.7.

In some cases the ratios of births to marriages are so high as to cast doubt upon the figures. Thus 1,019 children were born to couples both natives of Poland in Michigan in 1894, while only 46 marriages took place between such couples. The fecundity reaches the remarkable figure of 22.1! An explanation of this anomalous result does not seem to be easily given. It might seem that for some reason there had been a remarkable falling off of Polish marriages in recent years, while children continued to be born as a result of marriages in previous years. But examination of a selected previous year, 1890, does not indicate that many more Polish couples were married than in 1894. It may be that a larger proportion of married couples reached Michigan as immigrants than of other nationalities, and correspondingly smaller numbers of young men and young women who marry in this State. Another explanation of this discrepancy, and possibly the most important one, arises from the different methods of collecting the statistics of births and marriages. Supervisors enumerate the births, and a child born of parents speaking the Polish language or whose surnames were apparently Polish, would be readily set down as born of Polish parents. This would especially be the case if the enumerator was ignorant of the language and regarded distinctions as to the exact part of Poland from which any parent came as of little importance. The marriage returns on the contrary are based upon the statements of the parties themselves, as a rule, and a native of German Poland or Austrian Poland would probably be generally returned as a native of Germany or Austria, respectively.

Table 39.—*Comparison of the number of children born in Michigan in 1894 of parents of given nationality with the number of marriages registered for the year 1894 of the corresponding nationality.*

Birthplaces of bridegrooms and fathers.	Birthplaces of brides and mothers.	Number of marriages, 1894.	Number of births, 1894.	Children born per marriage.
United States.....	{ United States.....	10,842	19,182	1.8
	{ Canada.....	889	1,692	1.9
	{ England and Wales.....	115	201	1.7
	{ Ireland.....	51	134	2.6
	{ Germany.....	282	646	2.3
	{ Holland.....	63	145	2.3
	{ All countries.....	12,732	22,481	1.8
Canada.....	{ United States.....	1,232	2,388	1.9
	{ Canada.....	679	3,294	4.9
	{ England and Wales.....	35	109	3.1
	{ Ireland.....	17	63	3.7
	{ Germany.....	38	87	2.3
	{ All countries.....	2,065	6,076	2.9
England and Wales.....	{ United States.....	290	485	1.9
	{ Canada.....	68	178	2.6
	{ England and Wales.....	125	563	4.5
	{ All countries.....	487	1,318	2.7
Scotland.....	{ United States.....	29	81	2.8
	{ Canada.....	13	69	5.3
	{ All countries.....	62	272	4.4
Ireland.....	{ United States.....	89	254	2.9
	{ Canada.....	22	99	4.5
	{ Ireland.....	48	246	5.1
	{ All countries.....	177	637	3.6
Germany.....	{ United States.....	466	1,239	2.7
	{ Canada.....	42	105	2.5
	{ Germany.....	671	4,469	6.7
	{ All countries.....	1,232	6,196	5.0
Austria.....	{ Austria.....	42	252	6.0
	{ All countries.....	71	282	4.0
Holland.....	{ United States.....	108	212	2.1
	{ Holland.....	187	1,011	5.4
	{ All countries.....	309	1,265	4.1
Norway.....	{ Norway.....	48	252	5.3
	{ All countries.....	98	320	3.3
Sweden.....	{ Sweden.....	248	1,076	4.3
	{ All countries.....	336	1,213	3.6
Denmark.....	{ Denmark.....	40	209	5.2
	{ All countries.....	87	289	3.3
Russia.....	{ Russia.....	241	859	3.6
	{ All countries.....	291	927	3.2
Poland.....	{ Poland.....	46	1,019	22.2
	{ All countries.....	70	1,111	15.9
Italy.....	{ Italy.....	25	219	8.8
	{ All countries.....	34	235	6.9
All countries.....	{ United States.....	13,256	24,481	1.8
	{ Canada.....	1,735	5,520	3.2
	{ England and Wales.....	293	921	3.1
	{ Scotland.....	42	163	3.9
	{ Ireland.....	137	494	3.6
	{ Germany.....	1,070	5,367	5.0
	{ Austria.....	50	271	5.4
	{ Holland.....	263	1,189	4.5
	{ Norway.....	86	336	3.9
	{ Sweden.....	301	1,176	3.9
	{ Denmark.....	67	248	3.7
	{ Russia.....	273	904	3.3
	{ Poland.....	54	1,049	19.4
	{ Italy.....	26	221	8.5
	{ All countries.....	18,220	44,596	2.4

CAUSES AND CONSEQUENCES OF DECLINING FECUNDITY.

The decline in the fruitfulness of the population of Michigan, and especially the low rates of fecundity of marriage and fertility of women of child-bearing age displayed in the preceding tables, should arrest the attention of the inhabitants of the State, and more especially that of the native-born population, whose capability of self-maintenance, not to speak of a reasonable natural increase, seems to be seriously in question. It was shown by the last United States census that a large portion of the State, including many of the oldest agricultural counties, had either actually lost population during the preceding decade, or had increased so slightly as to be nearly stationary. It is true that a part of this loss results from the migration of natives of Michigan to other states and to the larger cities of this State, but that it is also in part to be ascribed to the failure of natural increase, more especially among our native population, appears from the census data in regard to the size of families. The average size of families in Southern and Central Michigan, as shown in a comparative map of the United States,* is less than that for any extended region in the United States, with the exception of parts of New England, New York, New Jersey, and a strip of counties in Ohio.

The two factors mentioned by Dr. Newsholme (page 113, preceding) as chiefly affecting the fecundity of marriage, viz., the duration of married life and the age at which marriage is contracted by women, are mutually dependent, since as the average age of woman at marriage increases, the duration of fruitful married life up to the physiological limit correspondingly decreases. From this statement must be excepted such marriages as are unnaturally terminated, *i. e.*, by divorce, instead of normally by the death of either husband or wife. The mean duration of married life, as calculated by Dr. Farr for England in 1871, was about 27 years. The mean duration of marriages interrupted by divorce in Michigan is less than 10 years. As a certain proportion of divorced persons do not remarry, thus terminating the marriage as finally as if by death, and as even in the case of remarriages, the continuity of the home is interrupted for a longer or shorter period, it is evident that no inconsiderable diminution of the average duration of fruitful married life is brought about. It is further to be considered that divorces interrupt marriages at the time when, as shown by statistics of the ages of parents, the largest number of children would be normally brought forth, and that the possible contingency of divorce upon more or less trivial occasion, as well as the lowered moral condition attending lax divorce laws, are not favorable to the production or maintenance of families.†

Average ages at marriage, by nativity, of females married in Michigan during four quinquennial periods from 1875 to 1894.

Five-year periods.	Average age at marriage,—years.		
	All nativities.	Native- born.	Foreign- born.
1875-79.....	23.0	22.6	24.4
1880-84.....	23.3	22.9	24.3
1885-89.....	23.7	23.0	24.6
1890-94.....	24.0	23.2	24.9

* Eleventh U. S. Census, 1890. Part I, Population. Map on p. clxxxviii.

† See page 167 for statistics showing the amount and tendency of divorce in Michigan.

The average age of females at marriage has steadily increased in Michigan since the first statistics were given on the subject in 1874 up to the present time. This is true both of the native and foreign-born brides, but is somewhat more marked in the case of the former. For all nativities the average age of women at marriage has increased exactly one year from the five-year period, 1875-79, to the five-year period, 1890-94. This fact is indicated also in Table 57, in which the shifting of the proportions of females married from the lower to the higher age-periods during recent years may be seen. For example, 36.9 per cent of all females married during the period 1871-80 were under twenty years of age; 36.5 per cent were aged from 20 to 25 years. In the period 1886-90, however, the percentage of females married under 20 years of age fell to 32.8, and that of those aged 20-25 years rose to 39.5 per cent.

What the exact effect of the increase of the age at marriage of females in Michigan would have upon the diminution of the fecundity of marriage, cannot be stated, since no data are available for the State on this subject. The following statements from the *Statistical Register* of New South Wales for the year 1893 will, however, throw some light upon the question in a general way. In that colony the age at marriage, together with the number of children borne during her lifetime, is registered in connection with the record of the death of each female. It should be remembered that the experience of a single year, especially for the ages having few marriages, requires additional confirmation, but the general indications of the table are undoubtedly correct.

Fertility of women as affected by age at marriage.

Age at marriage.	Deaths of married women N. S. W. 1893.	Average number of children resulting from each marriage.	Age at marriage.	Deaths of married women N. S. W. 1893.	Average number of children resulting from each marriage.
All ages.....	2,404	5.12	29.....	41	4.34
			30.....	52	3.29
14.....	2	3.50	31.....	20	3.15
15.....	26	7.08	32.....	24	2.58
16.....	81	6.77	33.....	14	4.07
17.....	144	7.34	34.....	17	2.06
18.....	175	6.17	35.....	20	1.85
19.....	192	6.43	36.....	13	1.15
20.....	234	5.94	37.....	10	1.20
21.....	199	5.33	38.....	7	1.14
22.....	168	5.12	39.....	8	1.62
23.....	143	4.92	40.....	14	1.15
24.....	147	5.28	41.....	5	1.20
25.....	142	4.56	42.....	5	.80
26.....	81	3.95	43.....	5	2.60
27.....	71	3.97	44.....	3	.38
28.....	56	4.29			

The mean number of children borne by females married at from 15 to 19 years of age, inclusive, is 6.76. For the next five-year period of ages it is 5.32, a loss of 1.44 children per marriage thus attending an advance of five years in age at marriage. It is evident, therefore, that the shifting of the proportions of females married to later age-periods that has occurred in Michigan may be one of the factors of the diminished birth-rate.

The birth-rate has declined during recent years not only in this country, where it has been perhaps marked by the greatest rate of diminution, but also in Europe and Australia. In the Twenty-fifth Michigan Registration Report a diagram and abstract of a paper* by Dr. J. S. Billings were presented in regard to this subject, the conclusions embraced in which seem to have generally met the approval of statisticians. In the New Zealand Year-Book for 1894 they are quoted and it is shown that the average interval between births in married women of child-bearing age in that colony has advanced from 3.14 years in 1881 to 3.33 years in 1886 and 3.62 years in 1891. For the reason that they clearly and concisely indicate the principal causes of the great social change in progress, Dr. Billings's conclusions are again presented.

In discussing the probable reasons for the diminution of the birth-rate in this country, Dr. Billings successively excludes the ideas of diminished power of either sex for the production of children, race deterioration caused by alcohol, syphilis or tobacco, and changes in mode of life of the people *per se*. This latter element, associated with the increasing migration from the country to the city and the increased demand for luxury in daily life, no doubt is influential, but "the most important factor in the change is the deliberate and voluntary avoidance or prevention of child-bearing on the part of a steadily increasing number of married people, who not only prefer to have but few children, but who know how to obtain their wish." Among the reasons for this are (1) the great diffusion of physiological information; (2) lessening of restraint from religious and social opinion; and (3) the greater cost of family life, which leads to the desire to have fewer children in order that they may each be better provided for. "In the struggle for what is deemed a more desirable mode of existence at the present day, marriage is held less desirable, and its bonds less sacred than they were forty years ago." It is becoming less an institution of lasting character whose primary object is the establishment of the family, with all that that term once implied, than a mere social function, easily abrogated when convenience or caprice makes such a step seemingly desirable, and one whose lack of permanence and generally unstable character do not make children desirable additions.

The ultimate consequences of this condition of affairs are well expressed by Rev. S. W. Dike, Secretary of the National Divorce Reform League, in a paper on "The Perils of the Family." With special reference to the statistics of Massachusetts, to which, however, the statistics of Michigan are coming to have a very close resemblance, he says:

"The declining fruitfulness of the family, especially among people of the so-called native stock, has become a matter of serious concern. In Massachusetts, the mother of foreign birth has on the average fifty per cent more children than the mother born in this country. It is true that the death-rate among children of foreign parentage is much greater than among the others, but after all allowance for this, the parent of foreign births rears a much larger percentage of children than the other. And notwithstanding the presence of the foreign element, the birth-rate in some of the older states is lower than in most European countries, and

* Originally published in the *Forum*, December, 1894.

is steadily declining. France is the only country in Europe whose birth-rate is as low as that of Massachusetts, and France is alarmed at her condition. Massachusetts is indifferent, for she can recruit her population from Ireland and Canada. But other states are doubtless just as badly off. No well informed physician believes that this low birth-rate is to any great degree due to loss in reproductive powers, though there is something in this—more, however, as effect than as cause of a declining birth-rate. In three or four sections, and these are large enough to be seriously indicative, the physicians are of the opinion that legitimate children would be fifty per cent more numerous but for criminal deeds. This refers to all classes of people as a whole. In some of our cities, and among intelligent and even Christian people, and very widely too in rural communities, it looks as if there is a prevalent and growing intention, even at the cost, if need be, both of good morals and law, to let the inferior classes rear most of the children. Many of the families which are best fitted so far as pecuniary means and social opportunity are concerned, are deliberately choosing to be unfruitful. And it is the testimony of gynecologists that more of their patients come from this class than from those women to whom maternity has brought its natural ills.

"We must not shut our eyes to the fact that there is a very strong tendency among us to turn over the work of rearing the children who are to be the parents of the next century, to the classes who are least fitted for the task, and that we are thus greatly adding to the burdens of state and church. The so-called dangerous classes multiply. We accept the increase and try to care for it, but without seeking to cleanse the fountain or to increase the forces of the good through the laws of nature as well as by special grace."

NOTE.—Evidence at hand since the original printing of this study of fecundity and fertility in Michigan, and which the reprinting of certain pages gives the opportunity of here referring to, goes to show that the allowance made on page 118 for foreign marriages in computing the fecundity of foreign-born women, instead of being "a very loose approximation," as stated in the text, was in reality a remarkably close estimate. This appears from the fact that the final statement of fecundity given in Table 38 for the last period, 5.1, agrees almost exactly with the corresponding number, 5.2, obtained in answer to a specific question by the State census of 1894.

DELINQUENT TOWNSHIPS AND TOWNSHIPS REPORTING NO BIRTHS.

Tables 40 and 41 respectively present the townships and wards reporting no deaths for the year 1894, and those whose supervisors failed to perform their duty and make returns to the county clerk as required by law. In some few cases indicated in the notes, the supervisors have stated to this Department that their returns were duly made, thus leaving the burden of neglect upon the county officials.

The aggregate population of townships in which it was stated that no births occurred was 2,900, considerably less than the corresponding number for 1893, which was 4,650. The population of delinquent townships for 1894, 16,457, was considerably greater than that for the preceding year, 9,578. In both classes it is undoubtedly true that births actually occurred during the year in many cases, and that neglect or forgetfulness of a somewhat troublesome duty is chiefly responsible for failures to report. Comparison of the returns of births for the census year 1893-94, five months of which were coincident with the registration year 1894, will fully bear out this assertion. The comparison may be readily made by turning to Table 17, Part I, of this Report, beginning on page 34.

Table 40.—*List of townships in which it was reported that no births occurred in 1894, showing population in 1894.*

County.	Township.	Population, June 1, 1894.
Baraga.....	Covington.....	88
Cheboygan.....	Ellis.....	163
Chippewa.....	Trout Lake.....	89
Crawford.....	{ Ball.....	120
	{ Grove.....	95
	{ Maple Forest.....	212
Delta.....	Sack Bay.....	208
Emmet.....	Egleston.....	140
Gladwin.....	{ Buckeye.....	254
	{ City of Gladwin:	
	{ 3d ward.....	144
	{ 4th ward.....	132
Keweenaw.....	Grant.....	139
Lake.....	{ Lake.....	89
	{ Yates.....	205
Luce.....	Columbus.....	57
Newaygo.....	Lincoln.....	408
Ogemaw.....	Foster.....	136
Ontonagon.....	Carp Lake.....	53
Oscoda.....	Greenwood.....	79
Roscommon.....	Markey.....	39
Total population reporting no births.....		2,900

Table 41.—*List of townships from which no returns of births were received for 1894, showing population in 1894. (List closed December 1, 1895).*

County.	Township.	Population, June 1, 1894.
Alger.....	Munising (a).....	367
Chippewa.....	{ Drummond (a).....	406
	{ Raber (a).....	453
	{ Bentley (a).....	266
	{ Billings (a).....	122
Gladwin.....	{ Tobacco (b).....	441
	{ Gladwin City:	
	1st ward (a).....	263
	2d ward (a).....	293
Hillsdale.....	{ Hillsdale City:	
	3d ward.....	986
	4th ward.....	1,051
Iosco.....	{ Burleigh (a).....	566
	{ Wilber (a).....	323
Lake.....	{ Eden.....	222
	{ Glencoe.....	214
Marquette.....	Sands (a).....	248
Mecosta.....	{ Big Rapids City:	
	1st ward.....	870
Menominee.....	Holmes (d).....	414
	{ Goodar.....	172
	{ Horton.....	282
Ogemaw (c).....	{ Mills.....	81
	{ Ogemaw.....	162
	{ Richland.....	623
	{ West Branch.....	1,806
Ontonagon.....	{ Interior (a).....	1,623
	{ McMillan (a).....	1,782
Otsego.....	Charlton.....	131
Rosecommon.....	Nester.....	211
Wayne.....	Hamtramck (a).....	2,075
Total population of delinquent townships.....		16,457

a Supervisor (or assessor) neglected to make returns to county clerk.

b Supervisor stated that returns were made to county clerk, but none were transmitted to this Department.

c The county clerk delayed making returns so long that the usual inquiries in regard to delinquent townships could not be made.

d Supervisor states that 4 births were reported to county clerk in June. They have not been transmitted to the State Department.

PART III.—MARRIAGES IN MICHIGAN DURING THE YEAR 1894.

The decrease in the number of marriages annually registered in the State continues, as noted in the last report, and is apparent in even more marked degree than in the previous year. Only 18,220 marriages were returned for the year 1894, a number less by 977 than the number recorded for 1893, which number, 19,197, was itself less by 910 marriages than the number registered for 1892. Since 1892, therefore, there has been a loss of 1887 couples from the annual marriage returns. The marriage-rate, based upon the returns, and the enumerated population of the State, as shown in Table 8, page 20, is, with two exceptions, the years 1869 and 1877, the lowest in the history of registration in this State, being only 16.3 persons married per 1,000 population. The years excepted were before the introduction of the marriage license system and the registration was probably less accurate than at present, for which reason it may be safely asserted that the year 1894 was characterized by the lowest marriage-rate ever recorded in the State.

As in 1893, the diminution in the number of persons married chiefly affects the foreign-born population, which forms the larger part of the population of the Upper Peninsula, and which has been the greatest sufferer from the prevalence of "hard times" in general, as well as being specially affected by strikes and closure of mines. There were 337 fewer native-born males, and 360 fewer native-born females married in Michigan in 1894 than in 1893, while of the foreign-born males a decrease of 644, and of the foreign-born females a decrease of 597, was shown.

The course of the registration of marriages in individual counties, and the remarkable losses sustained in certain ones, may be conveniently studied in Tables 15 and 16, on pages 29 and 31. The former table presents the marriage-rates (persons married per 1,000 population) for all of the counties on the basis of the State census of 1894, while the second table referred to, compares the number of marriages registered in each county for the year 1894, with the number registered for the preceding year, thus enabling any changes or irregularities of registration to be readily noted. In the text relating to these tables, the more striking changes are noted and compared with the corresponding variations in the returns of births and deaths, so that no further reference to the subject is here necessary.

Certain data pertaining to the nationality of persons married, and to the relations of nationality to the intermarriages of the native-born and foreign-born population of the State, are presented in this report for the first time (Tables 50, 51 and 52), all previous reports merely making a distinction between native-born and foreign-born.

The more extended analysis of the foreign-born element of our population, by separate nationalities, may be regarded as a step of great importance, and it is fortunate

that for such purposes the data relating to the distribution of the different nationalities in the population of the State are available as determined both by the last United States census (1890) and by the recent State census (1894). In Table 17, page 34, may be found a statement of the number of inhabitants of each nationality by counties, as ascertained by the latter, which will serve as a basis for many important comparisons with the data contained in the tables of this part of the report.

At the end of this portion of the report, certain statistics, derived in part from private sources, are presented on the subject of the movement of divorce in this State. It is to be regretted that no official reports are required to be made by the county clerks to this Department on this important subject, since a knowledge of the number of divorces granted annually is very necessary in comparing the statistics of marriages and births in this State with those of other states and countries, and since, indeed, the statistics of divorce in themselves are of great social interest, it is hoped that the statistics presented may at least call attention to the advisability of the official registration of divorces in this State.

SUMMARY OF THE REGISTRATION OF MARRIAGES IN 1894.

A condensed statement of the principal features of interest in the registration of marriages in Michigan for the year 1894 is herewith presented:

Total number of marriages performed,	18,220
Marriages per 1,000 estimated population,	8.1
Persons married per 1,000 population,	16.8
Decrease of number of marriages registered for the year 1894 (18,220) from the number for 1893 (19,197),	977

The largest number of marriages of any month in the year occurred in October, 2,084 or 11.2 per cent; the smallest number was recorded for February, 1,060 or 5.8 per cent.

Of the 18,220 marriages, there were:

Both bridegroom and bride of native birth,	10,842
Both bridegroom and bride of foreign birth,	2,979

Including mixed marriages, *i. e.*, those in which the parties were of different nationalities, there were married:

Males of native birth,	12,782
Males of foreign birth,	5,467
Females of native birth,	18,256
Females of foreign birth,	4,482

The distinction of nationality is made for the first time in this report. The following are the most important combinations:

Males native, females born in Canada,	889
Males born in Canada, females native,	1,282
Both males and females born in Canada,	679
Males born in Germany, females native,	466
Both males and females born in Germany,	671

Of the 36,440 persons married, the following was the distribution according to color:

White,	86,078
Colored (Black, 180; Mulatto, 75; Indian, 105; Unknown, 2),	862

As to age at marriage, the most important groups were:

Males aged 20 to 24 inclusive,	6,785 or 87.2 per cent.
Males aged 25 to 29 inclusive,	5,564 or 80.5 per cent.
Females aged under 20 years,	5,668 or 81.1 per cent.
Females aged 20 to 24 inclusive,	7,181 or 89.4 per cent.

Average ages of each nativity, by sex, were as follows:

Average age of native-born males married in 1894,	28.9 years.
Average age of native-born females married in 1894,	28.9 years.
Average age of foreign-born males married in 1894,	30.9 years.
Average age of foreign-born females married in 1894,	26.0 years.

The number of persons of each sex married at ages under those established by law is of importance. Each year a few such cases are returned, but, on the whole, the provisions of the license law in this respect are carefully observed.

Number of males married below legal age (18 years),	1
Number of females married below legal age (16 years),	9

The arrangement and contents of the tables relating to marriages are as follows:

Synopsis of tables relating to marriages.

Table.	Marriages in Michigan, 1894.
42.	Marriages, by months, for each of the years 1885-94, inclusive; with average for the ten-year period.
43.	Comparison of marriages, by months, for the year 1894 with the average for the ten-year period, 1885-94.
44.	Licenses issued on which returns were not made during the year 1894, by counties; with percentage of licenses not returned to licenses returned.
45.	Marriages by months, 1894,—detailed statement by counties. NOTE on color of persons married in Michigan in 1894.
46.	Number and per cent of persons married, by nativity and sex, 1894.
47.	Marriages in Michigan, by nativity, in the years 1891-94, and quinquennial averages for the periods 1871-75, 1876-80, 1881-85, 1886-90.
48.	The average ages, by nativity, of persons married in Michigan during the years 1885-94; with the mean of the ten-year period.
49.	Marriages and persons married, by nativity, in Michigan during the year 1894, showing distribution by counties.
50.	Intermarriages, by nationality, 1894.
51.	Nationality of foreign-born persons married in Michigan in 1894, showing distribution by counties.
52.	Marriage-rates, by nationality, in Michigan, 1894.
53.	Marriages in 1894, arranged according to the periods of age of bridegrooms and brides, with distinction of civil condition.
54.	Number of first marriages, second marriages, etc., performed in Michigan in 1894.
55.	Number of persons married in Michigan under the legal ages, by sex, during ten years, 1885-94.
56.	Statement of the per cents of males married at each period of age in the years 1891-94, and the quinquennial periods, 1871-75, 1876-80, 1881-85, 1886-90.
57.	Statement of the per cents of females married at each period of age in the years 1891-94, and the quinquennial periods 1871-75, 1876-80, 1881-85, 1886-90.
58.	Persons married, by sex and periods of age, in each county, 1894.

Synopsis of tables.—CONCLUDED.

Table.	Divorces in Michigan.
59.	Marriages and divorces, marriage-rates and divorce-rates, and ratios of marriages to divorces in Michigan for the years 1867-94 (divorce statistics not obtainable for certain years).
60.	Analysis of the disposition of divorce suits begun in Michigan for the years 1883, 1884, 1893 and 1894 (Mr. Root's data), showing the number and percentage granted, otherwise disposed of, and still pending.
61.	Divorces and separations in various countries—comparative rates per 100,000 married couples.
62.	Percentage of divorced persons to married persons for the United States, geographical divisions, and Michigan, 1890.
63.	Statement by counties of statistics of divorces in Michigan for the years 1883, 1884, 1893, 1894, (Mr. Root), 1893 (Mr. Stevens), and 1883, 1884 (U. S. Commissioner of Labor).

MARRIAGES BY MONTHS.

Table 42 presents the numbers of marriages returned for each month of the year 1894 in convenient form for comparison with the corresponding figures for each of the years of the decade 1885-94, and with the average of the decade. The maximum for 1894 occurred in October, its usual place being November. The minimum number registered was for the month of February, this being partly due to the fact that that calendar month is the shortest of the year, and partly to the fact that the daily marriage-rate of this part of the year is nearly or quite the lowest of that at any other season. This fact, and the true relations of the months as to the relative numbers of marriages performed in them, are well shown by Table 43, in which the average daily number of marriages for each calendar month of the year 1894 and of the ten-year period, 1885-94, and also the relative rank of each month on a scale of 100, are given. In the figures given for the ten-year period, care has been taken to increase the numbers registered by the ratio between the average population of the decade and that of the year 1894, thus making the two sets of figures directly comparable.

Table 42.—Marriages returned, by months, for the years 1885-94; with average for the ten-year period.

Years.	Total marriages.	Months of marriage.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
1885.....	15,885	1,206	1,065	1,103	1,323	1,206	1,162	1,298	1,072	1,400	1,633	1,705	1,683	1
1886.....	16,665	1,193	1,030	1,353	1,170	1,305	1,247	1,346	1,173	1,597	1,724	1,777	1,736	7
1887.....	17,179	1,192	1,097	1,239	1,322	1,348	1,321	1,342	1,426	1,793	1,555	1,776	1,724	5
1888.....	17,297	1,280	1,204	1,218	1,511	1,315	1,244	1,254	1,218	1,582	1,824	1,836	1,804	7
1889.....	18,317	1,439	1,331	1,415	1,398	1,459	1,404	1,382	1,266	1,652	1,908	1,892	1,778	3
1890.....	18,664	1,315	1,252	1,249	1,614	1,356	1,432	1,436	1,314	1,739	1,854	2,057	1,994	2
1891.....	19,244	1,466	1,326	1,339	1,623	1,419	1,502	1,380	1,383	1,749	1,966	1,964	2,086	1
1892.....	20,107	1,333	1,455	1,542	1,543	1,590	1,751	1,386	1,407	1,826	2,037	2,181	2,049	5
1893.....	19,197	1,452	1,273	1,318	1,663	1,574	1,769	1,406	1,356	1,730	2,018	2,060	1,574	2
1894.....	18,220	1,366	1,060	1,403	1,552	1,348	1,486	1,262	1,256	1,704	2,084	1,992	1,754	3
Average, 1885-94.	18,078	1,325	1,209	1,323	1,472	1,392	1,437	1,349	1,286	1,677	1,859	1,926	1,818	4

Maxima in full-face type; minima in *italics*.

Table 43.—*Comparison of marriages registered for the year 1894, by months, with the ten years 1885-94, showing average daily number registered in each month, and the rank of each month on a standard scale of 100. Data for ten-year period 1885-94 corrected for increase of population.*

Year and months.	Year 1894.			Average of ten years, 1885-94.		
	Marriages registered.	Average daily number.	Rank.	*Marriages registered.	Average daily number.	Rank.
Year.....	18,220	49.9	-----	19,569	53.6	-----
January.....	1,366	44.1	88	1,434	46.3	86
February.....	1,080	37.9	76	1,308	46.4	87
March.....	1,403	45.3	91	1,432	46.2	86
April.....	1,552	51.7	104	1,593	53.1	99
May.....	1,348	43.5	87	1,507	48.6	91
June.....	1,486	49.5	99	1,556	51.9	97
July.....	1,262	40.7	82	1,460	47.1	88
August.....	1,256	40.5	81	1,392	44.9	84
September.....	1,704	56.8	114	1,815	60.5	113
October.....	2,034	65.6	131	2,012	64.9	121
November.....	1,992	66.4	133	2,085	69.5	130
December.....	1,754	56.6	113	1,968	63.5	118
Unknown.....	3	-----	-----	5	-----	-----
Average month.....	1,518	49.9	100	1,631	53.6	100

* Numbers given in Table 42 multiplied by 1.0825, the ratio between the population of Michigan in 1894 and the average estimated population of the period 1885-94. The monthly and daily numbers are, therefore, directly comparable for the year and ten-year period.

LICENSES ISSUED, BUT MARRIAGES NOT RETURNED, BY COUNTIES.

A very important exhibit is made in Table 44 of the number of licenses issued in each county of the State during the year 1894, for which returns have not been made. The aggregate number for the entire State was 551, or 3 per cent of the total marriages of the year. Whether marriages were solemnized on these licenses or not, there is no way of determining. In the majority of instances they probably were, and the failure of the completed marriage record to appear is the result of negligence and disregard of the law on the part of the clergyman or justice of the peace who performed the ceremony, or, possibly, may be due to carelessness in the office of the county clerk. Certainly, counties having the highest percentages of incomplete returns, as Dickinson, 10.9 per cent; Cheboygan, 11.5 per cent; Iosco, 14.5 per cent; Jackson, 13.5 per cent; Keweenaw, 10.0 per cent; Presque Isle, 13.5 per cent; and Wayne, 8.1 per cent, ought to show much better results.

Table 44.—*Licenses issued on which returns were not made during the year 1894, by counties; with percentage of licenses not returned to licenses returned.*

State and counties.	Licenses returned (marriages).	Licenses not returned.	Per cent of licenses not returned to marriages.	Counties.	Licenses returned (marriages).	Licenses not returned.	Per cent of licenses not returned to marriages.
State	18,220	551	3.0	Keweenaw	10	1	10.0
Alcona	30	—	—	Lake	42	3	7.1
Alger	11	—	—	Lapeer	242	—	—
Allegan	356	2	.6	Leelanau	60	1	1.7
Alpena	118	2	1.7	Lenawee	379	8	2.1
Antrim	110	2	1.8	Livingston	205	4	2.0
Arenac	50	2	4.0	Luce	26	1	3.8
Baraga	44	—	—	Mackinac	62	3	4.8
Barry	256	4	1.6	Macomb	214	5	2.3
Bay	409	17	4.2	Manistee	191	2	1.0
Benzie	73	2	2.7	Manitou	9	—	—
Berrien	407	8	2.0	Marquette	261	5	1.9
Branch	268	2	.7	Mason	129	1	.8
Calhoun	430	7	1.6	Mecosta	168	4	2.4
Cass	174	2	1.1	Menominee	149	4	2.7
Charlevoix	102	7	6.9	Midland	94	2	2.1
Cheboygan	130	15	11.5	Missaukee	75	1	1.3
Chippewa	163	4	2.5	Monroe	271	2	.7
Clare	62	—	—	Montcalm	300	9	3.0
Clinton	220	8	3.6	Montmorency	17	—	—
Crawford	35	1	2.9	Muskegon	213	—	—
Delta	159	1	.6	Newaygo	156	3	1.9
Dickinson	110	12	10.9	Oakland	279	6	2.2
Eaton	305	6	2.0	Oceana	151	7	4.6
Emmet	110	2	1.8	Ogemaw	60	3	5.0
Genesee	364	3	.8	Ontonagon	58	—	—
Gladwin	53	—	—	Osceola	122	4	3.3
Gogebic	82	2	2.4	Oscoda	13	1	5.6
Grand Traverse	200	—	—	Otsego	51	2	3.9
Gratiot	281	9	3.2	Ottawa	261	7	2.7
Hillsdale	825	6	1.8	Presque Isle	37	5	13.5
Houghton	390	7	1.8	Roscommon	16	—	—
Huron	225	2	.9	Saginaw	602	15	2.5
Ingham	357	6	1.7	Sanilac	256	7	2.7
Ionia	321	5	1.6	Schoolcraft	66	2	3.0
Iosco	69	10	14.5	Shiawassee	327	5	1.5
Iron	22	1	4.5	St. Clair	458	6	1.3
Isabella	207	—	—	St. Joseph	212	7	3.3
Jackson	370	50	13.5	Tuscola	258	7	2.7
Kalamazoo	390	4	1.0	Van Buren	254	2	.8
Kalkaska	59	1	1.7	Washtenaw	309	9	2.9
Kent	1,079	14	1.3	Wayne	2,082	169	8.1
				Wexford	139	2	1.4

MARRIAGES BY MONTHS, BY COUNTIES.

The detailed exhibit by counties and months of marriages returned in 1894 is seen in Table 45. To this table is appended as a foot-note a statement of the facts in regard to marriages of colored persons, which has formerly been presented in a special table. The total number of colored marriages is so small, however, that this table consisted mainly of blank spaces, and it is believed that the data can be better examined in the condensed form here given.

In Table 11, Part I, will be found a comparison of the number of persons married, by color, with the number of colored births and deaths, and with the colored population of the State as given by the last State census.

Table 45.—*Distinguishing, by counties and by months, the number of marriages returned for the year 1894.*

State and counties.	Year, 1894.	Months, 1894.												
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
State	18,220	1,366	1,060	1,403	1,552	1,348	1,486	1,262	1,256	1,704	2,084	1,992	1,754	3
Alcona	30	5	4	2	1	2	1	1	4	5	3	2	-----	-----
Alger	11	-----	1	-----	-----	1	4	1	1	-----	-----	2	-----	-----
Allegan	356	34	23	30	30	26	30	22	18	25	38	45	35	-----
Alpena	118	6	6	11	23	7	11	11	9	7	11	8	8	-----
Antrim	110	8	5	6	11	4	10	12	11	12	11	7	13	-----
Arenac	50	4	2	2	7	7	3	5	4	3	7	3	3	-----
Baraga	44	1	2	-----	6	4	5	4	1	8	6	3	4	-----
Barry	256	16	17	22	22	18	9	13	19	29	27	35	29	-----
Bay	409	18	25	27	28	42	37	42	26	49	38	45	32	-----
Benzie	73	7	5	6	5	5	2	7	4	7	9	6	10	-----
Berrien	407	30	14	28	33	22	38	30	40	28	56	50	37	1
Branch	268	24	20	37	15	14	12	14	25	23	34	28	22	-----
Calhoun	430	29	29	38	40	29	40	27	20	40	40	54	43	1
Cass	174	9	13	14	18	14	9	12	18	16	20	15	16	-----
Charlevoix	102	9	6	10	6	9	6	11	7	8	8	10	12	-----
Cheboygan	130	10	5	8	10	8	8	8	10	15	18	19	11	-----
Chippewa	163	18	8	8	13	6	19	14	16	9	25	16	11	-----
Clare	62	5	6	2	8	4	6	8	1	1	10	4	7	-----
Clinton	220	10	13	19	18	6	18	10	16	25	32	26	27	-----
Crawford	35	2	2	3	3	1	6	2	3	3	5	2	3	-----
Delta	159	11	6	5	20	10	19	16	16	10	22	15	9	-----
Dickinson	110	5	12	9	10	10	10	7	9	11	8	9	10	-----
Eaton	305	18	16	26	15	19	25	18	18	24	45	43	38	-----
Emmet	110	6	6	10	4	8	3	13	10	11	18	11	10	-----
Genesee	364	24	28	31	26	22	30	25	26	32	41	41	38	-----
Gladwin	53	3	2	6	3	3	5	9	5	3	7	4	3	-----
Gogebic	82	5	6	10	6	6	13	7	3	4	6	11	5	-----
G'd Traverse	200	13	8	12	19	19	18	19	12	17	22	14	27	-----
Gratiot	281	20	12	29	21	14	15	30	24	23	22	32	39	-----
Hillsdale	325	18	29	36	22	17	22	18	13	29	45	36	40	-----
Houghton	360	33	15	23	14	34	36	40	33	49	48	40	25	-----
Huron	225	14	10	9	26	12	18	11	9	23	28	38	37	-----
Ingham	357	35	24	26	25	23	31	23	20	33	46	33	27	1
Ionia	321	24	17	31	25	18	28	21	28	34	34	32	29	-----
Iosco	66	4	6	4	3	9	9	8	7	4	3	8	4	-----
Iron	22	3	-----	2	3	3	2	2	2	-----	2	3	-----	-----
Isabella	207	13	20	18	22	13	14	14	13	18	22	16	24	-----
Jackson	370	32	22	36	23	34	31	17	22	31	43	32	47	-----
Kalamazoo	390	19	32	41	21	50	36	30	24	30	40	35	32	-----
Kalkaska	59	2	4	8	3	3	3	5	7	7	1	7	9	-----
Kent	1,079	90	65	83	95	96	95	74	52	94	124	120	91	-----
Keweenaw	10	-----	1	1	-----	1	3	-----	3	3	1	-----	-----	-----
Lake	42	2	3	6	4	-----	3	3	5	2	5	3	6	-----
Lapeer	242	11	14	22	18	20	7	10	16	26	34	37	27	-----
Leelanau	60	5	2	7	6	5	1	6	2	9	3	5	9	-----
Lenawee	379	31	20	23	28	26	27	17	32	45	38	52	40	-----
Livingston	205	21	14	20	13	12	9	11	18	16	16	18	37	-----
Luce	26	5	2	3	1	2	-----	2	1	2	4	1	3	-----
Mackinac	62	4	2	6	7	3	5	6	6	5	5	6	7	-----
Macomb	214	24	12	12	24	23	19	10	10	13	22	26	19	-----
Manistee	191	21	11	17	17	16	18	13	11	16	23	15	13	-----
Manitou	9	2	1	-----	-----	-----	-----	-----	-----	6	-----	-----	-----	-----
Marquette	261	16	7	22	26	24	33	18	29	28	20	16	22	-----
Mason	129	11	4	7	12	10	10	15	8	10	8	19	15	-----
Mecosta	163	17	7	9	9	19	15	10	12	16	12	18	24	-----
Menominee	149	14	5	6	16	16	10	11	15	16	15	12	13	-----

Table 45.—CONCLUDED.—*Marriages by counties and months, 1894.*

Counties.	Year, 1894.	Months, 1894.												
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
Midland	94	11	7	9	12	6	5	5	4	7	8	11	9	-----
Missaukee	75	5	3	5	6	3	2	6	7	7	9	11	11	-----
Monroe	271	29	19	17	33	22	19	16	17	21	29	31	18	-----
Montcalm	300	32	16	22	30	32	15	27	13	16	25	42	30	-----
Montmorency.	17	2	2	-----	2	2	-----	-----	-----	1	3	5	-----	-----
Muskegon	218	9	17	18	23	17	15	15	14	20	29	16	25	-----
Newaygo	156	4	10	13	16	9	9	18	13	15	15	10	24	-----
Oakland	279	28	15	32	22	14	24	16	13	15	29	37	34	-----
Oceana.	151	7	6	15	19	6	14	9	10	12	12	33	8	-----
Ogemaw	60	3	3	4	9	5	2	2	7	5	9	8	3	-----
Ontonagon	58	1	4	3	9	3	2	4	14	5	7	4	2	-----
Oscoda	122	6	6	11	10	5	9	8	7	13	13	15	14	-----
Oscoda	18	2	-----	-----	1	2	1	-----	3	3	1	4	1	-----
Otsego	51	4	3	4	4	2	4	5	3	6	10	4	2	-----
Ottawa	261	11	14	22	24	17	19	19	22	27	35	28	23	-----
Presque Isle.	37	2	1	1	7	5	2	6	1	2	5	4	1	-----
Roscommon	16	1	1	2	-----	3	2	1	2	-----	75	-----	2	-----
Saginaw	602	47	31	44	63	58	53	43	44	61	72	38	50	-----
Sanilac	256	22	13	21	25	16	17	13	14	27	22	36	30	-----
Schoolcraft	66	2	2	5	3	4	4	5	4	7	10	10	10	-----
Shiawassee	327	24	20	20	26	15	28	15	28	39	27	54	31	-----
St. Clair	458	47	32	20	37	39	36	30	21	31	77	52	36	-----
St. Joseph	212	17	10	16	10	11	12	14	16	17	29	27	33	-----
Tuscola	258	21	14	25	25	16	9	13	17	40	18	33	27	-----
Van Buren	254	16	12	22	17	16	23	15	21	31	22	32	27	-----
Washtenaw	309	18	20	31	34	23	32	17	23	26	29	33	23	-----
Wayne	2,082	162	117	115	189	164	222	187	139	217	238	219	163	-----
Wexford	139	12	11	17	11	6	8	10	11	16	13	13	11	-----

NOTE TO TABLE 45.—COLOR OF PERSONS MARRIED IN MICHIGAN, 1894.

Out of the total of 18,220 marriages returned as having occurred in Michigan during the year 1894, 18,041 were between persons white in color. There were 95 marriages of blacks, 34 of mulattoes and 50 between Indians. The white marriages constitute 99.02 per cent of the total marriages of all colors, a preponderance so great as to render any detailed study of marriages by color in Michigan of very trivial importance. There were 29 marriages of mixed race, 8 more than the number recorded for the previous year. These are included in the totals, white, black, mulatto, etc., the rule being to classify the marriage according to the color of the groom. When the race is given as "half-breed" or "white and Indian," the case has been included in the number of Indian marriages.

BLACK MARRIAGES.—Total for State, 95. By counties:—Wayne, 40; Washtenaw, 9; Cass, 7; Berrien, 6; Mecosta, 4; Allegan, Ingham, Kalamazoo, Oakland and Saginaw, each 3; Calhoun, Kent, Ottawa and Van Buren, each 2; Bay, Eaton, Ionia, Jackson, Lenawee, and Menominee, each 1.

MULATTO MARRIAGES.—Total for State, 34. By counties:—Wayne, 11; Cass, Kalamazoo, each 7; Berrien, Kent, Van Buren, each 2; Barry, Jackson, Montcalm, each 1.

INDIAN MARRIAGES.—Total for State, 50. By counties:—Charlevoix, Mackinac, Manitou, each 6; Mason, 4; Cheboygan, Delta, Leelanau, each 3; Antrim, Calhoun, Isabella, Saginaw, each 2; Alger, Baraga, Berrien, Dickinson, Grand Traverse, Kalkaska, Marquette, Missaukee, Ottawa, Schoolcraft, and Van Buren, each 1.

MIXED MARRIAGES.—Total for State, 29. Eleven white males married colored females, as follows:—Mulatto—Allegan, Benzie, Cass, each 1; Indian—Emmet, Isabella, Marquette, each 1; Half-breed—Chippewa, Mackinac, each 2; Wexford, 1. Two white males married females of unknown or unspecified color, 1 in Allegan, and 1 in Lenawee. Thirteen black males married females of other color, as follows:—White—Wayne, 2; Berrien, Oakland, Saginaw, Washtenaw, each 1; Mulatto—Kalamazoo, Wayne, each 2; Berrien, Cass, Menominee, each 1. Three half-breeds married white females, 1 each in Chippewa, Mackinac, and Ottawa counties.

MARRIAGES BY NATIVITY.

Table 46 exhibits the number and proportion of the bridegrooms and brides of each nativity married in Michigan in 1894. The per cents of native-born males and females married continue higher than usual, owing to the unusual conditions of distress affecting the Upper Peninsula. The same change is well seen in Table 47, which extends the comparison to the years 1891-93, and also, by five-year periods, to the early years of registration. In this table the decline in the percentage of native-born males married has been continuous for many years back, excepting, of course, minor oscillations for certain years. In 1894, the per cent of marriages of persons both native-born rises to 59.5, a ratio higher than any recorded since 1880. Marriages of foreign-born couples have fallen correspondingly.

Table 46.—By nativity, the number and per cent of brides and bridegrooms returned for the year 1894.

Bridegrooms and brides,— nativity specified.		Brides, 1894.			Bridegrooms, 1894.	
		Native-born.	Foreign-born.	Unknown.	Total of each nativity.	Per cent of each nativity.
Bridegrooms..	{ Native-born.....	10,842	1,499	391	12,732	69.9
	{ Foreign-born.....	2,400	2,979	88	5,467	30.0
	{ Unknown.....	14	4	3	21	.1
Brides.....	{ Total of each nativity....	13,256	4,482	482	18,220	-----
	{ Per cent of each nativity..	72.8	24.6	2.6	-----	100.0

Table 47.—Nativity of marriages in Michigan for the years 1891-94; compared with averages for the quinquennial periods, 1871-75, 1876-80, 1881-85, 1886-90.

Years and periods averaged.	Nativity of marriages,—Per cents of total.				
	Both native-born.	Both foreign-born.	Foreign groom and native bride.	Native groom and foreign bride.	One or both unknown.
Average, 1871-75.....	59.7	18.5	12.3	7.0	2.6
Average, 1876-80.....	63.2	14.0	13.3	7.4	2.2
Average, 1881-85.....	58.2	19.4	12.4	8.7	1.3
Average, 1886-90.....	56.4	20.3	13.2	8.1	2.0
Year 1891.....	55.7	20.2	13.6	7.8	2.7
Year 1892.....	56.5	20.3	13.0	7.7	2.5
Year 1893.....	58.0	18.5	12.8	7.9	2.7
Year 1894.....	59.5	16.3	13.2	8.2	2.7

AVERAGE AGE AT MARRIAGE BY NATIVITY.

The average ages of bridegrooms and brides married in Michigan are shown, by nativity, for the past ten years in Table 48. The foreign-born marry somewhat later than the native-born, the reason for which, no doubt, lies to some extent, in the loss of time required after arrival in this country to make the necessary preparations and arrange for marriage. The same class of population would probably, normally, show a considerably lower average age at marriage than the native-born. Both native and foreign-born, males and females, show a considerably increased age for 1894 as compared with the years immediately preceding, due probably to the pressure of the unfavorable business conditions prevailing throughout the country during the past few years, as a result of which many marriages have been postponed, while others have fallen through altogether.

Table 48.—*The average ages, by nativity and sex, of persons married in Michigan during the years 1885-94; with the mean of the average ages for the ten-year period.*

Years.	All nativities.		Native-born.		Foreign-born.		Unknown nativity.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1885.....	28.4	23.4	27.8	22.9	29.5	24.7	30.6	24.0
1886.....	28.3	23.4	27.8	22.9	29.3	24.6	28.4	24.3
1887.....	28.6	23.6	28.2	23.2	29.4	24.5	29.9	23.7
1888.....	29.2	24.4	28.1	23.0	29.3	24.8	30.2	25.5
1889.....	28.2	23.5	27.9	22.9	29.0	24.5	28.3	25.8
1890.....	28.9	24.3	28.1	22.8	29.3	24.6	27.0	25.6
1891.....	28.5	23.6	28.0	23.0	29.3	24.7	29.3	27.3
1892.....	28.5	23.7	28.1	23.2	29.4	24.5	28.9	27.5
1893.....	28.6	23.8	28.1	23.2	29.8	24.8	29.7	28.3
1894.....	29.5	24.5	28.9	23.9	30.9	26.0	34.9	28.0
Average, 1885-94.....	28.7	23.8	28.1	23.1	29.5	24.8	29.5	26.0

NATIVITY OF MARRIAGES AND PERSONS MARRIED, BY COUNTIES.

Table 49 displays the distribution of marriages of each nativity and of mixed nativities, together with a statement of those returned with the nativity of either or both parties unstated, for the entire State and for each of its counties. Also, the number of persons of each sex and of each nativity is given for each county.

With respect to the distribution of marriages, by nativity, among the counties of the State, very much of interest may be observed. Great differences exist in the relative numbers of native and foreign marriages in the thickly-settled southern part of the lower peninsula, which is slightly affected by immigration, and the rapidly growing communities of northern Michigan. In these latter there has been a great influx of foreigners seeking employment in the mining and lumbering industries, and the records of certain counties show that the purely American population is so small that marriages in which both parties are native-born are quite exceptional.

While, however, much of interest may be learned from the study of the following table, it is recommended that Table 51, showing the nature of the foreign-born element, according to the countries of birth, be used in connection with it, as thereby information of a more definite character will be obtainable.

Table 49.—*Exhibiting, for the State and counties, (a) the number of marriages, by nativity; and (b) the number of persons married, by nativity and sex, during the year 1894.*

State and counties.	Total marriages, 1894.	(a) Marriages, by nativity, 1894.									(b) Persons married, by nativity, 1894.					
		Both native-born.	Both foreign-born.	Foreign male, native female.	Foreign female, native male.	Female unk.		Male unk.		Both unknown.	Native-born.		Foreign-born.		Un- known.	
						Male.		Fe- male.			Males.	Females.	Males.	Females.	Males.	Females.
						Native.	Foreign.	Native.	Foreign.							
State.....	18,220	10,842	2,979	2,400	1,499	391	88	14	4	3	12,732	13,256	5,467	4,482	21	482
Alcona.....	30	6	13	6	4	---	1	---	---	---	10	12	20	17	---	1
Alger.....	11	4	2	2	3	---	---	---	---	---	7	6	4	5	---	---
Allegan.....	356	285	13	30	22	6	---	---	---	---	313	315	43	35	---	6
Alpena.....	118	22	42	33	14	5	2	---	---	---	41	55	77	56	---	7
Antrim.....	110	55	14	22	18	1	---	---	---	---	74	77	36	32	---	1
Arenac.....	50	15	8	14	9	2	2	---	---	---	26	29	24	17	---	4
Baraga.....	44	9	20	6	5	12	1	1	---	---	16	16	27	25	1	3
Barry.....	256	227	2	14	5	5	2	---	---	1	237	241	18	7	1	8
Bay.....	409	142	98	95	61	7	5	1	---	---	210	238	198	159	1	12
Benzie.....	73	48	6	13	4	2	---	---	---	---	54	61	19	10	---	2
Berrien.....	407	315	31	22	26	10	3	---	---	---	351	337	56	57	---	13
Branch.....	268	235	3	17	7	6	---	---	---	---	248	252	20	10	---	6
Calhoun.....	430	344	20	30	17	17	1	1	---	---	378	375	51	37	1	18
Cass.....	174	142	2	13	2	13	---	1	---	1	157	156	15	4	2	14
Charlevoix.....	102	57	12	22	11	---	---	---	---	---	68	79	34	23	---	---
Cheboygan.....	130	41	32	22	26	5	3	---	1	---	72	63	57	59	1	8
Chippewa.....	163	22	93	16	32	---	---	---	---	---	54	38	109	125	---	---
Clare.....	62	33	12	10	5	2	---	---	---	---	40	43	22	17	---	2
Clinton.....	220	187	2	18	9	3	1	---	---	---	199	205	21	11	---	4
Crawford.....	35	18	6	5	4	2	---	---	---	---	24	23	11	10	---	2
Delta.....	159	39	76	28	14	2	---	---	---	---	55	67	104	90	---	2
Dickinson.....	110	15	79	8	6	2	---	---	---	---	23	23	87	85	---	2
Eaton.....	305	285	1	11	5	2	---	1	---	---	292	297	12	6	1	2
Emmet.....	110	75	8	11	13	2	---	1	---	---	90	87	19	21	1	2
Genesee.....	364	278	9	45	27	5	---	---	---	---	310	323	54	36	---	5
Gladwin.....	53	32	6	12	3	---	---	---	---	---	35	44	18	9	---	---
Gogebic.....	82	11	61	9	1	---	---	---	---	---	12	20	70	62	---	---
Grand Traverse.....	200	141	18	24	17	---	---	---	---	---	158	165	42	35	---	---
Gratiot.....	281	223	6	25	12	12	3	---	---	---	247	248	34	18	---	15
Hillsdale.....	325	279	3	11	6	24	2	---	---	---	309	290	16	9	---	26
Houghton.....	390	71	217	77	21	2	2	---	---	---	94	148	296	238	---	4
Huron.....	225	61	60	64	40	---	---	---	---	---	101	125	124	100	---	---
Ingham.....	357	276	25	31	18	7	---	---	---	---	301	307	56	43	---	7
Ionia.....	321	246	10	17	14	30	3	1	---	---	290	264	30	24	1	33
Iosco.....	69	19	26	16	7	---	1	---	---	---	26	35	43	33	---	1
Iron.....	22	2	12	7	1	---	---	---	---	---	3	9	19	13	---	---
Isabella.....	207	142	22	21	14	5	3	---	---	---	161	163	46	36	---	8
Jackson.....	370	293	22	31	20	3	1	---	---	---	316	324	54	42	---	4
Kalamazoo.....	390	312	29	25	24	---	---	---	---	---	336	337	54	53	---	---
Kalkaska.....	59	39	3	12	2	3	---	---	---	---	44	51	15	5	---	3
Kent.....	1,079	602	223	154	85	14	1	---	---	---	701	756	378	308	---	15
Keweenaw.....	10	1	6	2	1	---	---	---	---	---	2	3	8	7	---	---
Lake.....	42	23	8	4	4	3	---	---	---	---	30	27	12	12	---	3
Lapeer.....	242	159	13	37	31	1	---	---	1	---	191	196	50	45	1	1
Leelanau.....	60	32	14	12	2	---	---	---	---	---	34	44	26	16	---	---

VITAL STATISTICS OF MICHIGAN, 1894.

Table 49.—CONCLUDED.—*Marriages by counties and nativity.*

Counties.	Total marriages, 1894.	(a) Marriages, by nativity, 1894.										(b) Persons married, by nativity, 1894.					
		Both native-born.	Both foreign-born.	Foreign male, native female.	Foreign female, native male.	Female unk.		Male unk.		Both unknown.	Native-born.		Foreign-born.		Un-known.		
						Male.	Female.	Male.	Female.		Males.	Females.	Males.	Females.	Males.	Females.	
Lenawee	379	319	12	16	20	11	1	350	336	28	32	1	11				
Livingston	205	167	3	15	14	4	2	185	182	20	17		6				
Luce	26	4	12	5	5			9	9	17	17						
Mackinac	62	29	16	14	2		1	31	43	31	18						
Macomb	214	138	14	20	20	16	5	174	158	39	35	1	21				
Manistee	191	60	78	34	18		1	78	94	113	96		1				
Manitou	9	7	1	1				7	8	2	1						
Marquette	261	47	148	50	16			63	97	198	164						
Mason	129	70	31	16	11	1		82	86	47	42		1				
Mecosta	168	111	13	21	16	5	2	132	132	36	29		7				
Menominee	149	28	69	31	14	5	2	47	59	102	83		7				
Midland	94	57	4	15	16	2		75	72	19	20		2				
Missaukee	75	38	15	12	10			48	50	27	25						
Monroe	271	227	11	17	10	5	1	242	244	29	21		6				
Montcalm	300	202	19	45	23	10	1	235	247	65	42		11				
Montmorency	17	9	4	2	2			11	11	6	6						
Muskegon	218	120	44	28	24	1	1	145	148	73	68		2				
Newaygo	156	121	12	12	8	3		132	133	24	20		3				
Oakland	279	207	12	32	14	11	3	232	239	47	26		14				
Oceana	151	110	7	21	12	1		123	131	28	19		1				
Ogemaw	60	23	15	14	8			31	37	29	23						
Ontonagon	58	31	10	13	3		1	34	45	23	13	1					
Osceola	122	66	13	15	15	13		94	81	28	25		13				
Oscoda	18	15		2			1	15	17	3			1				
Otsego	51	19	8	5	5	10	4	34	24	17	13		14				
Ottawa	261	148	34	45	32	2		182	193	79	66		2				
Presque Isle	37	13	6	11	7			20	24	17	13						
Roscommon	16	11		1	3	1		15	12	1	3		1				
Saginaw	602	313	84	111	62	23	8	398	424	203	147	1	81				
Sanilac	256	94	50	66	41	1	3	136	161	119	91	1	4				
Schoolcraft	66	16	27	16	6	1		23	32	43	33		1				
Shiawassee	327	250	14	35	18	8	2	276	285	51	32		10				
St. Clair	458	209	83	93	56	10	6	275	303	182	139	1	16				
St. Joseph	212	190	5	7	10			200	197	12	15						
Tuscola	258	150	21	51	31	3	1	184	201	73	52	1	5				
Van Buren	254	217	2	13	8	13	1	238	230	16	10		14				
Washtenaw	309	201	32	37	22	12	4	235	239	73	54	1	16				
Wayne	2,082	870	631	338	233	8	1	1,111	1,209	970	864	1	9				
Wexford	139	72	31	16	12	6	1	90	89	48	43	1	7				

INTERMARRIAGES BY NATIONALITY.

The facts exhibited in Tables 50, 51 and 52, relative to the manner in which the natives of foreign countries intermarry in Michigan with natives of the United States and with one another, here appear for the first time either in the Registration or Census Reports. Previously the very vague and indefinite statement by nativity, as foreign-born and native-born, has been alone employed, but it is evident, with very little consideration, that the different nationalities classed together as "foreign-born" differ so greatly among themselves in their social and vital conditions, and in their relations to the native-born population, as to make any conclusions derived merely from such a general classification, of very little definite value. Moreover, the character of the foreign-born population in various counties widely differs, so that an intelligent study of the vital statistics of the State by counties demands that the influence of the different nationalities be exactly determined.

Table 50 shows, by a cross-arrangement, the number of males of the most important nationalities, returned as having married females of the same or other nationalities in Michigan during the year 1894. Taking as an example the first horizontal line, it appears that 10,842 males born in the United States married females of the same nationality; 889 native-born males married Canadian females; 115 married females born in England or Wales; 20 married Scotch; 51, Irish; 282, German, etc. The total number of native-born males married, as shown in the last column on the right, was 12,732, upon which basis the percentage married to each nationality shown in the table may be computed. In like manner, taking the first vertical column, the manner in which the 13,256 females born in the United States and married in Michigan during the year, intermarried with other nationalities may be seen. The same facts may be examined for each of the foreign nationalities stated in the left-hand column, by tracing the figures to the right as they intersect the corresponding list of nationalities of females given at the top of the table. What may be called the "clannishness" of different nationalities here finds illustration, in the greater or less proportion of marriages performed with their own or with other nationalities. Of course, differences of language, religion, and customs may largely determine apparent exclusiveness in some cases, as well as the degree to which a foreign nationality is dispersed throughout the State, or colonized in some particular locality. As a general illustration of this group of facts the readiness with which the natives of Canada and Great Britain intermarry with natives of the United States (such marriages often exceeding the number of those between natives of those countries), may be compared with the less, though still large, proportion of German-American marriages, and the much smaller number of Swedish-American marriages.

It should be remembered that the facts given in this table are only for a single year, and that in many cases the numbers given are too small to serve as the bases of any conclusive statements. It will be only by continuing this line of observation for a series of years that reliable general conclusions may be arrived at. Comparison of the data given in this table may be made with the table of corresponding form (Table 26, page 94), showing the parent-nationality of the children born in Michigan during the year, and with the statements of population of each nationality in the State, according to the censuses of 1880, 1890, 1894 (Table 18, page 68).

Table 51 exhibits the manner in which the marriages of foreign-born persons are distributed, by nationality, through the counties of the State.

Table 50.—*Intermarriages by*

Grooms born in—	Brides								
	United States.	Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.	Holland.	Belgium.
United States.....	10,842	889	115	20	51	282	1	63	2
Canada.....	1,232	679	35	8	17	38	2	3	1
England and Wales...	260	68	125	3	8	9		1	
Scotland.....	29	13	5	6	3	2			
Ireland.....	89	22	3	2	48	4		1	
Germany.....	466	42	4	2	5	671	3	7	
Austria.....	13	1				12	42		
Holland.....	103	2			2	15		187	
Belgium.....	8	1		1	1	3			11
Switzerland.....	13	4			1	9	1		
Norway.....	24	1				1			
Sweden.....	48	3	1		1				
Denmark.....	32	2	1			4			
Russia (Finland).....	20	1	2			10	1	1	
Hungary.....	2								
Bohemia.....	5								
Poland.....	19					5			
France.....	13					1			
Italy.....	4	3				2			
All others.....	20	2	1			1			
Unknown.....	14	2	1			1			
Total females.....	13,256	1,735	293	42	137	1,070	50	263	14
Per cent.....	72.8	9.5	1.6	.2	.8	5.9	.3	1.4	.1

NATIONALITY OF PERSONS MARRIED.

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nationality in Michigan, 1894.

born in—												Total males.	Per cent.
Switz- erland.	Nor- way.	Swe- den.	Den- mark.	Russia (Fin- land).	Hun- gary.	Bohe- mia.	Po- land.	France.	Italy.	All others.	Unk.		
11	14	13	16	4	-----	3	3	4	-----	8	391	12,732	69.9
-----	-----	6	-----	1	-----	-----	-----	2	1	4	56	2,085	11.4
1	1	1	-----	1	-----	-----	-----	-----	-----	-----	9	487	2.7
-----	-----	1	-----	-----	-----	-----	-----	1	-----	-----	2	62	.3
-----	2	1	1	1	-----	-----	-----	-----	-----	-----	3	177	1.0
5	1	1	2	3	-----	1	4	-----	-----	2	13	1,232	6.8
1	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	1	71	.4
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	309	1.7
-----	-----	1	-----	-----	-----	-----	-----	1	-----	-----	1	28	.2
5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	33	.2
-----	48	15	3	6	-----	-----	-----	-----	-----	-----	-----	98	.5
-----	15	248	4	15	-----	-----	-----	-----	-----	-----	1	336	1.8
-----	2	6	40	-----	-----	-----	-----	-----	-----	-----	-----	87	.5
-----	3	8	1	241	-----	-----	1	-----	-----	1	1	291	1.6
-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----	-----	4	-----
-----	-----	-----	-----	-----	-----	9	-----	-----	-----	-----	-----	14	.1
-----	-----	-----	-----	-----	-----	-----	46	-----	-----	-----	-----	70	.4
-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	15	.1
-----	-----	-----	-----	-----	-----	-----	-----	-----	25	-----	-----	34	.2
-----	-----	-----	-----	1	-----	-----	-----	-----	-----	8	1	34	.2
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3	21	.1
23	86	301	67	278	2	14	54	9	26	23	482	18,220	-----
.1	.5	1.7	.4	1.5	-----	.1	.3	-----	.-----	.1	2.6	-----	100.0

Table 51.—*Exhibiting, for the State and counties, the nationalities of*

State and counties.	Total marriages, 1894.	Sex.	Total foreign-born persons married, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
State.....	18,220	{ Total..... Males..... Females.....	9,949 5,467 4,482	3,820 2,085 1,735	780 487 293	104 62 42	314 177 137	2,802 1,232 1,070	121 71 50
Alcona.....	30	{ Total..... Males..... Females.....	37 20 17	32 17 15	1 1				
Alger.....	11	{ Total..... Males..... Females.....	9 4 5	6 4 2			1 1	1 1	
Allegan.....	356	{ Total..... Males..... Females.....	78 43 35	18 12 6	8 5 3	2 1 1		18 7 11	2 2
Alpena.....	118	{ Total..... Males..... Females.....	133 77 56	81 51 30	3 1 2	2 1 2	1 1	32 18 14	
Antrim.....	110	{ Total..... Males..... Females.....	68 36 32	37 20 17	4 1 3		5 3 2	6 4 2	1 1
Arenac.....	50	{ Total..... Males..... Females.....	41 24 17	33 19 14	2 2	1 1	1 1	4 2 2	
Baraga.....	44	{ Total..... Males..... Females.....	52 27 25	16 8 8	3 2 1		2 2	5 3 2	
Barry.....	256	{ Total..... Males..... Females.....	25 18 7	6 5 1	4 1 3		1 1	10 8 2	
Bay.....	409	{ Total..... Males..... Females.....	357 198 159	194 110 84	8 4 4	2 1 1	11 5 6	114 61 53	1 1
Benzie.....	73	{ Total..... Males..... Females.....	29 19 10	14 10 4	2 1 1		1 1	2 2	
Berrien.....	407	{ Total..... Males..... Females.....	113 56 57	13 7 6	9 5 4		3 1 2	70 34 36	
Branch.....	268	{ Total..... Males..... Females.....	30 20 10	5 2 3	5 4 1		1 1	12 9 3	1 1
Calhoun.....	430	{ Total..... Males..... Females.....	88 51 37	28 17 11	10 4 6	3 2 1	6 2 4	26 16 10	
Cass.....	174	{ Total..... Males..... Females.....	19 15 4	11 8 3	1 1	1 1	3 2 1	2 2	
Charlevoix.....	102	{ Total..... Males..... Females.....	57 34 23	38 22 16	2 2		5 3 2	7 5 2	
Cheboygan.....	130	{ Total..... Males..... Females.....	116 57 59	75 36 39	9 5 4	1 1	1 1	24 11 13	
Chippewa.....	163	{ Total..... Males..... Females.....	234 109 125	195 86 109	13 10 3	4 2 2	3 1 2	2 2	

Table 51.—CONTINUED.—Nationalities of the

Counties.	Total marriages, 1894.	Sex.	Total foreign-born persons married, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
Clare	62	{ Total	39	32	1	—	—	4	—
		{ Males	22	18	1	—	—	2	—
		{ Females	17	14	—	—	—	2	—
Clinton	220	{ Total	32	11	8	—	—	12	—
		{ Males	21	5	7	—	—	9	—
		{ Females	11	6	1	—	—	3	—
Crawford	35	{ Total	21	7	—	—	1	3	—
		{ Males	11	4	—	—	1	1	—
		{ Females	10	3	—	—	—	2	—
Delta	159	{ Total	194	64	4	—	6	14	2
		{ Males	104	36	2	—	3	10	—
		{ Females	90	28	2	—	3	4	2
Dickinson	110	{ Total	172	25	26	—	2	11	24
		{ Males	87	12	15	—	2	4	14
		{ Females	85	13	11	—	—	7	10
Eaton	305	{ Total	18	10	4	—	—	2	—
		{ Males	12	7	2	—	—	1	—
		{ Females	6	3	2	—	—	1	—
Emmet	110	{ Total	40	12	4	2	1	15	—
		{ Males	19	3	2	1	1	9	—
		{ Females	21	9	2	—	—	6	—
Genesee	364	{ Total	90	64	11	2	5	5	—
		{ Males	54	38	7	1	3	5	—
		{ Females	36	26	4	1	2	—	—
Gladwin	53	{ Total	27	22	—	—	—	5	—
		{ Males	18	15	—	—	—	3	—
		{ Females	9	7	—	—	—	2	—
Gogebic	82	{ Total	132	11	23	—	2	2	2
		{ Males	70	8	12	—	1	1	1
		{ Females	62	3	11	—	1	1	1
Gr'd Traverse	200	{ Total	77	35	4	—	4	11	2
		{ Males	42	17	1	—	3	7	1
		{ Females	35	18	3	—	1	4	1
Gratiot	281	{ Total	52	38	4	—	1	4	—
		{ Males	34	25	4	—	1	1	—
		{ Females	18	13	—	—	—	3	—
Hillsdale	325	{ Total	25	7	5	—	3	9	1
		{ Males	16	4	5	—	1	5	1
		{ Females	9	3	—	—	2	4	—
Houghton	390	{ Total	534	71	86	4	15	31	30
		{ Males	296	47	52	3	6	16	16
		{ Females	238	24	34	1	9	15	14
Huron	225	{ Total	224	146	5	2	6	64	—
		{ Males	124	81	1	1	4	36	—
		{ Females	100	65	4	1	2	28	—
Ingham	357	{ Total	99	30	9	3	4	47	—
		{ Males	56	13	8	2	2	27	—
		{ Females	43	17	1	1	2	20	—
Ionia	321	{ Total	54	30	8	—	4	9	—
		{ Males	30	17	4	—	3	3	—
		{ Females	24	13	4	—	1	6	—
Iosco	69	{ Total	76	33	2	—	1	13	—
		{ Males	43	19	2	—	1	5	—
		{ Females	33	14	—	—	—	8	—

Table 51.—CONTINUED.—Nationalities of the

Counties.	Total marriages, 1894.	Sex.	Total foreign-born persons married, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
Iron	22	Total	32	5	-----	-----	3	1	6
		Males	19	4	-----	-----	3	-----	3
		Females	13	1	-----	-----	-----	1	3
Isabella	207	Total	82	65	5	-----	1	8	-----
		Males	46	35	2	-----	1	5	-----
		Females	36	30	3	-----	-----	3	-----
Jackson	370	Total	96	28	32	3	2	24	-----
		Males	54	16	19	1	1	14	-----
		Females	42	12	13	2	1	10	-----
Kalamazoo	390	Total	107	20	13	2	5	22	-----
		Males	54	10	6	1	3	11	-----
		Females	53	10	7	1	2	11	-----
Kalkaska	59	Total	20	10	2	1	2	3	-----
		Males	15	8	2	-----	2	2	-----
		Females	5	2	-----	1	-----	1	-----
Kent	1,079	Total	686	100	29	-----	22	109	7
		Males	378	54	17	-----	10	61	5
		Females	308	46	12	-----	12	48	2
Keweenaw	10	Total	15	1	2	-----	-----	3	-----
		Males	8	1	1	-----	-----	1	-----
		Females	7	-----	1	-----	-----	2	-----
Lake	42	Total	24	18	-----	-----	-----	3	-----
		Males	12	9	-----	-----	-----	2	-----
		Females	12	9	-----	-----	-----	1	-----
Lapeer	242	Total	95	63	10	2	2	16	-----
		Males	50	36	6	1	1	5	-----
		Females	45	27	4	1	1	11	-----
Leelanau	60	Total	42	9	1	1	-----	8	-----
		Males	26	6	1	1	-----	5	-----
		Females	16	3	-----	-----	-----	3	-----
Lenawee	379	Total	60	15	10	1	9	19	-----
		Males	28	5	5	1	6	7	-----
		Females	32	10	5	-----	3	12	-----
Livingston	205	Total	37	14	6	-----	3	14	-----
		Males	20	6	4	-----	2	8	-----
		Females	17	8	2	-----	1	6	-----
Luce	26	Total	34	13	-----	-----	-----	2	-----
		Males	17	7	-----	-----	-----	1	-----
		Females	17	6	-----	-----	-----	1	-----
Mackinac	62	Total	49	27	-----	-----	3	5	-----
		Males	31	19	-----	-----	2	2	-----
		Females	18	8	-----	-----	1	3	-----
Macomb	214	Total	74	23	5	-----	-----	43	-----
		Males	39	11	4	-----	-----	22	-----
		Females	35	12	1	-----	-----	21	-----
Manistee	191	Total	209	27	2	-----	1	42	1
		Males	113	15	1	-----	1	22	1
		Females	96	12	1	-----	-----	20	-----
Manitou	9	Total	3	-----	-----	-----	-----	-----	-----
		Males	2	-----	-----	-----	-----	-----	-----
		Females	1	-----	-----	-----	-----	-----	-----
Marquette	261	Total	362	56	85	1	7	12	2
		Males	198	29	53	-----	4	7	1
		Females	164	27	32	1	3	5	1

NATIONALITY OF PERSONS MARRIED, BY COUNTIES.

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foreign-born persons married in Michigan.

born persons married, 1894.

Hol- land.	Bel- gium.	Switzer- land.	Nor- way.	Sweden.	Den- mark.	Rus- sia (Fin- land).	Hun- gary.	Bo- hemia.	Po- land.	France.	Italy.	All oth- ers.
		1	1	9		6						
		1	1	5		2						
				4		4						
		1				1				1		
		1				1				1		
		1	1	2		2						1
		1	1	1		1						1
36	3	2		2						1		1
18	3	1		1								
18		1		1						1		1
					2							
					1							
					1							
335		4	3	34	15	11		2	11	1	1	2
183		1	1	19	10	5		1	6	1	1	2
162		2	2	15	5	6		1	5			
			2			7						
			2			3						
						4						
				3								
				2								
		1										1
		1										1
	2		14	4	1			2				
	1		9	2				1				
	1		5	2	1			1				
1		1	1	2	1							
1		1	1	1	1							
		1		6		12						
				3		6						
		1		3		6						
				3	2	9						
				8	1	4						
					1	5						
	2									1		
	1									1		
	1											
		1	20	50	25	2			38			
		1	9	25	14	1			24			
			11	25	11	1			14			
					3							
					2							
					1							
			22	81	5	82					6	3
			11	45	1	41					4	2
			11	36	4	41					2	1

Table 51.—CONTINUED.—Nationalities of the

Counties.	Total marriages, 1894.	Sex.	Total foreign-born persons married, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
Mason.....	129	Total.....	89	27	3	2	2	18	3
		Males.....	47	14	2	1	1	8	2
		Females.....	42	13	1	2	1	10	1
Mecosta.....	168	Total.....	65	39	1	-----	-----	12	-----
		Males.....	36	22	1	-----	-----	7	-----
		Females.....	29	17	-----	-----	-----	5	-----
Menominee....	149	Total.....	185	58	2	-----	1	34	4
		Males.....	102	34	2	-----	1	16	2
		Females.....	83	24	-----	-----	-----	18	2
Midland.....	94	Total.....	39	32	-----	-----	1	4	-----
		Males.....	19	14	-----	-----	1	2	-----
		Females.....	20	18	-----	-----	-----	2	-----
Missaukee.....	75	Total.....	52	20	1	1	-----	4	-----
		Males.....	27	9	1	1	-----	3	-----
		Females.....	25	11	-----	-----	-----	1	-----
Monroe.....	271	Total.....	50	7	4	1	1	33	-----
		Males.....	29	4	3	1	-----	20	-----
		Females.....	21	3	1	-----	1	13	-----
Montcalm.....	300	Total.....	107	41	8	1	-----	17	-----
		Males.....	65	22	7	1	-----	10	-----
		Females.....	42	19	1	-----	-----	7	-----
Montmorency..	17	Total.....	12	11	-----	-----	1	-----	-----
		Males.....	6	6	-----	-----	-----	-----	-----
		Females.....	6	5	-----	-----	1	-----	-----
Muskegon.....	218	Total.....	141	30	7	1	4	23	-----
		Males.....	73	14	7	1	3	13	-----
		Females.....	68	16	-----	-----	1	10	-----
Newaygo.....	156	Total.....	44	16	3	-----	2	9	1
		Males.....	24	9	2	-----	2	5	-----
		Females.....	20	7	1	-----	-----	4	1
Oakland.....	279	Total.....	73	24	20	3	9	14	1
		Males.....	47	14	15	3	7	7	1
		Females.....	26	10	5	-----	2	7	-----
Oceana.....	151	Total.....	47	20	4	1	1	5	-----
		Males.....	28	9	4	1	1	3	-----
		Females.....	19	11	-----	-----	-----	2	-----
Ogemaw.....	60	Total.....	52	47	2	-----	-----	2	-----
		Males.....	29	26	1	-----	-----	1	-----
		Females.....	23	21	1	-----	-----	1	-----
Ontonagon....	58	Total.....	36	19	1	-----	1	2	-----
		Males.....	23	13	1	-----	1	1	-----
		Females.....	13	6	-----	-----	-----	1	-----
Osceola.....	123	Total.....	56	27	3	-----	-----	11	-----
		Males.....	28	12	1	-----	-----	5	-----
		Females.....	28	15	2	-----	-----	6	-----
Oscoda.....	18	Total.....	3	3	-----	-----	-----	-----	-----
		Males.....	3	3	-----	-----	-----	-----	-----
		Females.....	-----	-----	-----	-----	-----	-----	-----
Otsago.....	51	Total.....	30	13	1	1	2	7	1
		Males.....	17	8	1	1	-----	2	1
		Females.....	13	5	-----	-----	2	5	-----
Ottawa.....	261	Total.....	145	21	2	2	1	23	-----
		Males.....	79	10	2	2	1	11	-----
		Females.....	66	11	-----	-----	-----	12	-----

born persons married, 1894.

[illegible]

Table 51.—CONCLUDED.—Nationalities of the

Counties.	Total marriages, 1894.	Sex.	Total foreign-born persons married, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scotland.	Ireland.	Germany.	Austria.
Presque Isle...	37	Total.....	30	8	-----	-----	1	15	-----
		Males.....	17	3	-----	-----	1	9	-----
		Females.....	13	5	-----	-----	-----	6	-----
Roscommon...	16	Total.....	4	4	-----	-----	-----	-----	-----
		Males.....	1	1	-----	-----	-----	-----	-----
		Females.....	3	3	-----	-----	-----	-----	-----
Saginaw	602	Total.....	350	160	19	7	12	123	1
		Males.....	203	97	13	4	7	69	1
		Females.....	147	63	6	3	5	59	-----
Sanilac.....	256	Total.....	210	174	7	3	2	20	-----
		Males.....	119	96	5	1	2	12	-----
		Females.....	91	78	2	2	-----	8	-----
Schoolcraft...	66	Total.....	76	29	1	1	-----	4	3
		Males.....	43	19	-----	1	-----	1	2
		Females.....	33	10	1	-----	-----	3	1
Shiawassee...	327	Total.....	83	43	8	2	4	18	-----
		Males.....	51	27	5	1	1	11	-----
		Females.....	32	16	3	1	3	7	-----
St. Clair.....	458	Total.....	321	227	32	5	12	37	-----
		Males.....	182	125	20	4	8	20	-----
		Females.....	139	102	12	1	4	17	-----
St. Joseph....	212	Total.....	27	3	8	-----	1	14	-----
		Males.....	12	1	5	-----	-----	6	-----
		Females.....	15	2	3	-----	1	8	-----
Tuscola	238	Total.....	125	101	6	1	2	14	-----
		Males.....	73	60	4	1	1	7	-----
		Females.....	52	41	2	-----	1	7	-----
Van Buren....	254	Total.....	26	9	7	-----	3	4	-----
		Males.....	16	3	7	-----	2	3	-----
		Females.....	10	6	-----	-----	1	1	-----
Washtenaw...	309	Total.....	127	34	19	-----	10	64	-----
		Males.....	73	17	11	-----	4	41	-----
		Females.....	54	17	8	-----	6	23	-----
Wayne	2,082	Total.....	1,834	595	119	32	80	829	25
		Males.....	970	300	71	18	42	432	15
		Females.....	864	295	48	14	38	397	10
Wexford	139	Total.....	91	34	2	-----	1	7	-----
		Males.....	48	19	1	-----	-----	3	-----
		Females.....	43	15	1	-----	1	4	-----

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born persons married, 1894.

[illegible]

PERSONS MARRIED, AND POPULATION BY NATIONALITY.

Table 52 is arranged so that the number of persons of each nationality married in Michigan during the year 1894 can be compared with the population of corresponding nationality according to the State census of 1894. There is much less variation between the rates for different countries than in the table of corresponding form for births (Table 27, page 96). Some allowance should be made for age distribution of the persons born in each country, as, for example, that of the natives of the United States, which includes a large number of children below the marriageable age. On the other hand, many foreign-born immigrants are married before coming to this country, so that their rates are not as high as they otherwise would appear. Scotland, Ireland and France show very low rates, due to the fact that immigrants of those nationalities have been, for the most part, a considerable time in the State, and have entered into marriage in previous years; but Poland, which also shows a low rate, has only comparatively recently contributed to the population of Michigan (see Table 7, page 19). The highest rates shown are for natives of Austria, Norway, Sweden, Denmark, and Russia (mostly Finland).

Table 52.—*Number of persons married of each nationality in Michigan during the year 1894, with rates per 1,000 population of like nationality.*

Country of birth.	Population, 1894.	Persons married, 1894.	Marriage- rate per 1,000 inhabitants of same nationality.
United States.....	1,670,786	25,968	15.6
Canada.....	200,447	3,820	19.1
England and Wales.....	49,314	780	15.8
Scotland.....	11,849	104	8.8
Ireland.....	35,221	314	8.9
Germany.....	143,057	2,302	16.1
Austria.....	4,651	121	26.0
Holland.....	32,868	572	17.4
Belgium.....	2,882	42	14.6
Switzerland.....	3,045	56	18.4
Norway.....	8,173	184	22.5
Sweden.....	28,197	637	22.6
Denmark.....	7,339	154	21.0
Russia.....	16,152	564	34.9
Hungary.....	439	6	13.7
Bohemia.....	2,757	28	10.2
Poland.....	15,366	124	8.1
France.....	2,849	24	8.4
Italy.....	3,397	60	17.7
All others.....	2,852	57	20.0

MARRIAGES BY PERIODS OF AGE AND CIVIL CONDITION.

The first part of Table 53, showing the arrangement of marriages according to the periods of age of the contracting parties for "The aggregate of all civil conditions," is identical with a table that has been presented in these Reports since the first years of registration. The distinctions with respect to the previous civil condition of the persons married, an element of great importance as affecting the age at marriage, are here given for the first time in a Michigan Report. Tables of similar form have been regularly presented in the Registration Reports of Massachusetts, Rhode Island and other states, and the Michigan Reports have, very justly, been subject to criticism for their failure to present such data, on the part of persons desiring to study certain important features of the registration of marriages in this State. It is accordingly hoped that the new form of table will meet a practical need, and prove of value to the students of the marriage statistics of Michigan.

It is scarcely necessary to give a word of explanation as to manner of reading these tables. Taking the first part as an illustration, and reading down the vertical columns, beginning with the left upper corner, we see that 236 females under 20 years of age married males under 20; 3,290 females under 20 married males aged from 20 to 25 years, etc. The total number of females married under 20 years of age was 5,668, which number was 31.1 per cent of all females married. The corresponding facts in regard to males of each age may be noted by reading the horizontal lines of the table. The largest number of marriages took place between males aged from 20 to 25 and females aged less than 20 years. The next largest group is that of males aged 20 to 25 and females of the same period of age. From these groups the numbers become less, gradually for males, more abruptly for females, with advancing years.

The second part of the table showing the distribution of first marriages includes a total of 14,163 couples, or 77.7 per cent of the total number of marriages during the year. Although including so large a proportion of marriages, the distribution by ages is seen to be much narrower, the marriages massing in the early age-periods. For this reason the tables formerly given in these Reports (corresponding to the first part of the present Table 53) were not at all representative of the mode of union, by ages, of by far the most important constituent of the Michigan marriage-rate, namely, couples in which both bride and groom were married for the first time. The same difference is brought out forcibly on comparing the percentages married at each age-period in the two parts of the table. The proportion of males married between the ages of 20 and 25, rises from 37.2 per cent, representing all civil conditions, to 46.0 per cent for first marriages; for females it rises from 39.4 per cent for all civil conditions at the period 20 to 25, to 45.0 per cent for the first marriages at the same period of age.

More bachelors, aged from 25 to 30 years, married widows than at any other period of age (28.4 per cent); the widows wedded by them were also more numerous at the same age-period (25.7 per cent). The largest percentage of widowers who married spinsters (23.9 per cent) was at the years 30 to 35; their brides were about 10 years younger for the most part (34.6 per cent aged 20 to 25 years).

For the second or subsequent marriages of both parties, there are no such abrupt climaxes in age-periods as in the previous parts of the table. Very nearly the same percentages obtain for males at each of the five successive five-year periods between the ages of 35 and 60, and for females the equality of the six periods between 25 and 55 is nearly as strongly marked.

Table 53.—Marriages in Michigan during the year 1894, by periods of age of persons married; showing also the number and percentage of each sex married at each period of age.*I.—Aggregate of all civil conditions.*

Ages of males, 1894.	Ages of females, 1894.																Total males.	Per cent of grooms at each age.
	Un- der 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 +	Unk.			
Under 20.....	286	57	9	---	---	---	---	---	---	---	---	---	---	---	---	352	1.9	
20 to 25.....	3,290	3,134	315	35	9	1	1	---	---	---	---	---	---	---	---	6,785	37.2	
25 to 30.....	1,547	2,667	1,156	148	35	6	3	1	1	---	---	---	---	---	---	5,564	30.5	
30 to 35.....	371	848	625	293	73	26	5	1	---	---	---	---	---	---	1	2,248	12.3	
35 to 40.....	121	314	305	221	188	36	14	5	---	---	---	---	---	---	1	1,205	6.6	
40 to 45.....	27	92	119	113	120	85	32	9	3	---	---	---	---	---	---	600	3.3	
45 to 50.....	18	42	54	67	120	80	62	17	5	1	---	---	---	---	---	466	2.6	
50 to 55.....	4	17	31	38	42	66	52	47	13	4	---	---	---	---	1	315	1.7	
55 to 60.....	2	4	7	16	19	32	51	58	32	7	2	2	---	---	---	232	1.3	
60 to 65.....	1	4	2	4	13	27	35	35	35	28	6	4	---	---	---	194	1.1	
65 to 70.....	1	---	2	6	8	14	15	25	25	27	24	2	---	---	---	149	.8	
70 to 75.....	---	---	---	1	1	2	4	14	19	16	8	7	1	---	---	73	.4	
75 to 80.....	---	1	---	---	2	1	2	3	7	3	4	---	1	---	---	24	.1	
80 and over....	---	---	---	---	---	1	1	2	3	1	2	2	---	---	---	12	.1	
Unknown.....	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	1	-----	
Total females	5,668	7,181	2,625	947	630	377	277	217	143	87	46	17	2	---	3	18,220	-----	
Brides, %	31.1	39.4	14.4	5.2	3.5	2.1	1.5	1.2	.8	.5	.3	.1	---	---	---	-----	100.0	

II.—First marriage of both parties.

Under 20.....	283	53	7	---	---	---	---	---	---	---	---	---	---	---	---	343	2.4
20 to 25.....	3,236	3,014	251	12	1	---	---	---	---	---	---	---	---	---	---	6,514	46.0
25 to 30.....	1,428	2,452	985	69	8	2	---	---	---	---	---	---	---	---	---	4,944	34.9
30 to 35.....	286	646	463	141	23	2	2	---	---	---	---	---	---	---	---	1,563	11.0
35 to 40.....	66	167	160	88	54	6	2	1	---	---	---	---	---	---	---	544	3.8
40 to 45.....	11	28	39	29	21	13	1	1	1	---	---	---	---	---	---	144	1.0
45 to 50.....	6	8	6	9	20	9	3	1	---	---	---	---	---	---	---	62	.4
50 to 55.....	2	---	7	3	4	4	3	---	---	---	---	---	---	---	---	23	.2
55 to 60.....	---	2	---	2	---	---	---	3	---	1	---	---	---	---	---	8	.1
60 to 65.....	---	---	---	---	3	2	1	---	1	1	---	---	---	---	---	8	.1
65 to 70.....	1	---	---	2	---	1	---	1	2	---	1	---	---	---	---	8	.1
70 to 75.....	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	-----
75 to 80.....	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	1	-----
Total females	5,319	6,370	1,913	355	135	39	12	8	4	2	1	---	---	---	---	14,163	-----
Brides, %	37.6	45.0	13.5	2.5	1.0	.3	.1	.1	---	---	---	---	---	---	---	-----	100.0

MARRIAGES BY PERIODS OF AGE AND CIVIL CONDITION. 157

Table 53.—CONTINUED.—Marriages in Michigan, 1894, by periods of age of persons married.

III.—First marriage of male; second or subsequent marriage of female.

Ages of males, 1894.	Ages of females, 1894.															Total males.	Per cent of grooms at each age.
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 +	Unk.		
Under 20.....	2	4	2	—	—	—	—	—	—	—	—	—	—	—	—	8	.9
20 to 25.....	14	98	55	23	8	1	1	—	—	—	—	—	—	—	—	188	20.3
25 to 30.....	10	68	99	58	23	2	1	1	1	—	—	—	—	—	—	263	28.4
30 to 35.....	4	22	50	75	30	17	2	—	—	—	—	—	—	—	1	201	21.7
35 to 40.....	—	18	19	41	41	10	5	2	—	—	—	—	—	—	1	132	14.3
40 to 45.....	—	8	8	12	17	9	7	4	1	—	—	—	—	—	—	61	6.6
45 to 50.....	—	1	4	7	9	12	5	5	1	—	—	—	—	—	—	44	4.8
50 to 55.....	—	—	1	1	2	2	6	1	3	—	—	—	—	—	—	16	1.7
55 to 60.....	—	—	—	2	1	2	—	2	—	—	—	—	—	—	—	7	.8
60 to 65.....	—	—	—	1	—	—	—	—	2	1	—	—	—	—	—	4	.4
65 to 70.....	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	.1
70 to 75.....	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	.1
Total females	30	197	238	220	181	55	27	15	9	2	—	—	—	—	2	926	-----
Brides, %	3.2	21.3	25.7	28.8	14.1	5.9	2.9	1.6	1.0	.2	—	—	—	—	.2	-----	100.0

IV.—Second or subsequent marriage of male; first marriage of female.

Under 20.....	1															1	.1
20 to 25.....	36	25	5													66	4.3
25 to 30.....	104	128	43	8	3											284	18.7
30 to 35.....	79	167	78	31	7	1										363	23.9
35 to 40.....	54	115	78	44	31	2										324	21.3
40 to 45.....	16	50	47	29	32	9	3									186	12.2
45 to 50.....	12	28	29	22	31	8	6	1								137	9.0
50 to 55.....	2	10	16	13	10	12	4	8	1	1						77	5.1
55 to 60.....	2	2	4	7	7	5	6	4	2							39	2.6
60 to 65.....	1	3	1	3	2	7	4	1	1							23	1.5
65 to 70.....			2	1	2	1	1	2	1	1	1					12	.8
70 to 75.....							1	1	3	2						7	.5
75 to 80.....		1								1						2	.1
Total females	307	527	303	158	125	45	25	17	8	5	1					1,521	
Brides, %	20.2	34.6	19.9	10.4	8.2	3.0	1.6	1.1	.5	.3	.1						100.0

Table 53.—CONCLUDED.—Marriages in Michigan, 1894, by periods of age of persons married.*V.—Second or subsequent marriage of both parties.*

Ages of males, 1894.	Ages of females, 1894.															Total males.	Per cent of grooms at each age.
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 +	Unk.		
Under 20.....																	
20 to 25.....	4	9	4													17	1.1
25 to 30.....	5	21	29	18	1	2	2									73	4.5
30 to 35.....	2	13	34	51	13	6	1	1								121	7.5
35 to 40.....	1	19	48	48	62	18	7	2								205	12.7
40 to 45.....		11	25	43	50	54	21	4	1							209	13.0
45 to 50.....		5	15	29	60	51	48	10	4	1						223	13.9
50 to 55.....		7	7	21	26	48	39	38	9	3					1	199	12.4
55 to 60.....			3	5	11	25	45	49	30	6	2	2				178	11.1
60 to 65.....		1	1		8	18	30	34	31	26	6	4				159	9.9
65 to 70.....				3	6	12	14	22	22	25	22	2				128	8.0
70 to 75.....				1	1	2	3	12	15	14	8	7	1			64	4.0
75 to 80.....					1	1	2	3	7	2	4		1			21	1.3
80 and over.....						1	1	2	3	1	2	2				12	.7
Unknown.....		1														1	.1
Total females.....	12	87	166	214	239	238	213	177	122	78	44	17	2		1	1,610	.....
Brides, % .....	.7	5.4	10.3	13.3	14.8	14.8	13.2	11.0	7.6	4.8	2.7	1.1	.1		.1	.....	100.0

Table 54.—Distinguishing, by sex, the number of first marriages, second marriages, etc., performed in Michigan during the year 1894.

Times married,—males.	Times married,—females.					Total males.	Per cent.
	First.	Second.	Third.	Fourth.	Fifth		
First marriage.....	14,163	880	44	2		15,089	82.8
Second marriage.....	1,405	1,163	144	11		2,723	14.9
Third marriage.....	104	204	53	2	1	364	2.0
Fourth marriage.....	12	17	10			39	.2
Fifth marriage.....		3	1			4	
Sixth marriage.....			1			1	
Total females.....	15,684	2,267	253	15	1	18,220	.....
Per cent.....	86.1	12.4	1.4	.1		.....	100.0

In connection with Table 53, Table 54 showing in cross-arrangement the number of persons of each sex married for the first, second, etc., time is presented. Of the 18,220 males married in 1894, 15,089, or 82.8 per cent, were married for the first time. 15,684 females, 86.1 of the total number, were married for the first time. The most frequently married man had been married five times before his marriage in 1894, and his bride had been twice married previously thereto. One female had been married four times before her marriage in 1894, and her husband had been married twice previously.

PERSONS MARRIED UNDER THE LEGAL AGES.

Only 1 male and 9 females were returned as having been married under the legal ages during the year 1894 in Michigan. This is the best showing, as regards compliance with the law, that has ever been given in these Reports. Much of the credit for the same is due to the statement of age required to be made to the county clerk previous to the issue of a license to marry under the present law, and while it cannot be unquestionably asserted that the law is never evaded by means of incorrect statements of age, it is true without doubt that the number of persons annually married below the legal ages has markedly decreased within the last few years. Prior to 1887 upwards of a hundred females were annually returned as having been married under the age of sixteen years, although then as now severe penalties were contained in the statutes for the punishment of any person solemnizing such marriages.

The male married under the legal age was returned from Gladwin county. This county also returned 2 females married under legal age (1 to the male mentioned), and was the only county returning more than one such marriage. The other counties returning each one female married under 16 years were Arenac, Clinton, Emmet, Huron, Ingham, Oakland and Sanilac. All were native-born, with the exception of the female returned from Arenac county, who was a native of Canada. The female aged 14 years was from Emmet county, all the others being 15 years of age.

Table 55.—Persons married in Michigan under the legal ages, 1885-94.

Years.	Total males under legal age.	Ages of males under 18 years.			Total females under legal age.	Ages of females under 16 years.			
		15.	16.	17.		12.	13.	14.	15.
1885.....	8	1	2	5	147	1	4	21	121
1886.....	7	.....	1	6	128	1	3	21	101
1887.....	6	.....	1	5	97	.....	2	19	76
1888.....	.....	.....	.....	.....	26	.....	.....	5	21
1889.....	.....	.....	.....	.....	19	1	.....	.....	18
1890.....	.....	.....	.....	.....	12	.....	.....	2	10
1891.....	2	.....	1	1	10	.....	1	.....	9
1892.....	1	.....	.....	1	11	.....	.....	1	10
1893.....	2	.....	1	1	12	.....	.....	2	10
1894.....	1	.....	.....	1	9	.....	.....	1	8
Total ten years, 1885-94.....	27	1	6	20	469	3	10	72	384

PENALTY FOR MARRYING PERSONS UNDER LEGAL AGES.

While such marriages, in which one or both of the parties is under the age of legal consent, are not *void*, but *voidable*, the law imposes a heavy penalty upon any person undertaking to perform them. Howell's Annotated Statutes read as follows:

§6209. Every male who shall have attained the full age of eighteen years, and every female who shall have attained the full age of sixteen years, shall be capable in law of contracting marriage, if otherwise competent.

§6219. If any person shall undertake to join others in marriage, knowing he is not lawfully authorized so to do, or knowing of any legal impediment to the proposed marriage, he shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by imprisonment in the county jail not more than one year, or by a fine not less than fifty, nor more than five hundred dollars, or by both such fine and imprisonment, in the discretion of the court.

§6224. In case of a marriage solemnized when either of the parties was under the age of legal consent, if they shall separate during such non-age, and not cohabit together afterwards, or in case the consent of one of the parties was obtained by force or fraud, and there shall have been no subsequent voluntary cohabitation of the parties, the marriage shall be deemed void without any decree of divorce or other legal process.

The compiler's note on §6219, referring to the case of *Bonker v. People*, 37 Mich., 4, states that "whatever is in the way of a valid marriage is such an impediment as the statute has in view. The statute applies to a marriage where the girl is under the age of consent." And Justice Cooley, in his opinion filed in the above case, expressly says that "when the statute does not authorize a certain marriage, a magistrate cannot be 'authorized' to join the persons in marriage." It is manifestly improper, therefore, for a county clerk to issue a license in any case whatever when it has appeared by affidavit previously filed that either one of the parties to the proposed marriage has not attained the full legal age necessary therefor; and such license, when improperly issued, cannot authorize any clergyman or magistrate to perform an illegal marriage.

PARENTAL CONSENT.

The consent of parents of the person desiring to be married under legal age is evidently without bearing upon the question. Parental consent has never been required in Michigan until the passage of the act of 1895 (No. 243), which requires that in the case of females under the age of eighteen years, the written consent of one parent or of the legal guardian must be filed with the county clerk previous to the issue of a license to marry. This act simply imposes an additional safeguard as regards the issuance of licenses to marry for females of legal age (16 years), but under the full age of eighteen years; it would be absurd to suppose that it was intended in any way to remove the restriction placed upon all marriages of females under the legal age of consent to marriage (16 years), whether by consent of parents or personal consent. These remarks are made because in the cases of certain of the voidable marriages for the year 1894, contained in the preceding table, explanation has been made by the county clerk, apparently with the view of explaining the issue of the license by him, that "the consent of parents had been obtained."

MARRIAGES BY PERIODS OF AGE.

In Tables 56 and 57, the distribution of the persons of each sex married in 1894, by five-year periods of age, as shown in Table 53, preceding, is compared with the years immediately antecedent, and with the quinquennial averages since the beginning of registration. The changes in the selection of marriage ages are more

MALES AND FEMALES MARRIED BY PERIODS OF AGE. 161

marked in the females than in the males, although both show higher per cents at advanced ages than in the early years of registration. Thus, comparing 1894 with the average of the five years, 1871-75, 37.2 per cent of all males married in the latter year between the ages of 20 and 25 years, against 41.2 per cent in the former period; while above the age of 25, and more markedly above the age of 30, the per cent married in 1894 is seen to be greater than the corresponding figures for 1871-75 in each case. Of all females married, 36.9 per cent were married under 20 years of age in 1871-75, as compared with only 31.1 per cent at that period in 1894; above 20 years, the periods show increased percentages in all cases for 1894.

Table 58 shows the distribution of persons married, by periods of age, through the counties of the State.

Table 56.—*Percentages of males married in Michigan, at specified periods of age, for the years 1891-94; compared with averages for the quinquennial periods, 1871-75, 1876-80, 1881-85, 1886-90.*

Years and periods averaged.	Ages of males, by periods of years, married 1871-94.														Unk.
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	Over 80.	
Average, 1871-75...	2.6	41.2	29.5	10.6	5.5	3.3	2.3	1.7	1.0	.8	.5	.3	.1	-----	.6
Average, 1876-80...	2.6	40.8	29.8	10.8	5.6	3.2	2.2	1.6	1.1	.8	.5	.3	.1	-----	.5
Average, 1881-85...	2.3	39.5	30.7	11.4	5.7	3.2	2.2	1.6	1.0	.9	.5	.3	.1	-----	.4
Average, 1886-90...	2.1	37.7	32.4	12.2	5.7	3.0	2.4	1.5	1.1	.8	.6	.3	.1	-----	.1
Year 1891.....	1.7	38.9	31.3	12.4	5.5	3.2	2.3	1.6	1.2	.7	.6	.3	.1	-----	-----
Year 1892.....	1.9	38.5	30.9	12.8	5.7	3.2	2.3	1.6	1.0	.9	.7	.4	.1	-----	-----
Year 1893.....	2.0	38.5	29.9	12.9	6.2	3.2	2.2	1.6	1.3	1.0	.6	.3	.1	-----	-----
Year 1894.....	1.9	37.2	30.5	12.3	6.6	3.3	2.6	1.7	1.3	1.1	.8	.4	.1	-----	.1

Table 57.—*Percentages of females married in Michigan, at specified periods of age, for the years 1891-94; compared with averages for the quinquennial periods, 1871-75, 1876-80, 1881-85, 1886-90.*

Years and periods averaged.	Ages of females, by periods of years, married 1871-94.														Unk.
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over	
Average, 1871-75...	36.9	36.5	12.7	5.0	3.0	2.0	1.3	.8	.5	.3	.2	-----	-----	-----	.9
Average, 1876-80...	37.4	37.4	11.7	4.7	3.1	1.9	1.3	.8	.5	.3	.2	-----	-----	-----	.7
Average, 1881-85...	33.8	38.7	13.7	4.9	3.1	1.9	1.3	.8	.5	.3	.2	.1	-----	-----	.6
Average, 1886-90...	32.8	39.5	14.2	5.2	2.9	1.9	1.3	.9	.6	.4	.2	.1	-----	-----	.2
Year 1891.....	31.0	41.7	13.6	5.3	2.3	1.9	1.3	1.0	.6	.4	.2	.1	-----	-----	.1
Year 1892.....	30.9	41.2	14.1	5.2	2.9	2.0	1.3	.9	.6	.5	.2	.1	-----	-----	.1
Year 1893.....	30.8	40.3	14.2	5.9	3.1	1.3	1.4	1.0	.6	.4	.2	.1	-----	-----	-----
Year 1894.....	31.1	39.4	14.4	5.2	3.5	2.1	1.5	1.2	.8	.5	.3	.1	-----	-----	-----

VITAL STATISTICS OF MICHIGAN, 1894.

Table 58.—Exhibiting, for the State and counties, the number of persons married, by sex and periods of age, during the year 1894.

State and counties.	Total marriages, 1894.	Sex of persons married.	Number of persons married, by periods of age, 1894.															
			Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 +	Unk.	
State.....	18,220	{ Total.....	6,029	13,966	8189	3195	1835	977	743	532	375	281	195	99	26	12	4	
		{ Males.....	352	6,785	5564	2248	1205	600	466	315	232	194	149	73	24	12	1	
		{ Females.....	5,668	7,181	2625	947	630	377	277	217	143	87	46	17	2	3	3	
Alcona.....	30	{ Total.....	12	26	11	4	1	4		1	1							
		{ Males.....	1	12	8	4	1	3			1							
		{ Females.....	11	14	3			1		1								
Alger.....	11	{ Total.....	1	6	8	2	3	1	1									
		{ Males.....		2	4	2	2		1									
		{ Females.....	1	4	4		1	1										
Allegan.....	356	{ Total.....	125	244	173	56	27	18	21	11	15	10	7	3	2			
		{ Males.....	9	119	117	40	21	11	11	6	7	5	6	3	1			
		{ Females.....	116	125	56	16	6	7	10	5	8	5	1		1			
Alpena.....	118	{ Total.....	45	82	50	33	11	6	4	2	1	1	1					
		{ Males.....	1	35	38	26	7	4	3	2	1		1					
		{ Females.....	44	47	12	7	4	2	1			1						
Antrim.....	110	{ Total.....	48	87	43	19	11	4	1	1	2	3	1					
		{ Males.....	2	48	29	16	7	4			1	2	1					
		{ Females.....	46	39	14	3	4		1	1	1	1						
Arenac.....	50	{ Total.....	26	33	18	9	3	6	2		1	2						
		{ Males.....	1	19	13	9	2	3			1	2						
		{ Females.....	25	14	5		1	3	2									
Baraga.....	44	{ Total.....	16	31	33	3	2	2		1								
		{ Males.....	1	14	22	3	1	2		1								
		{ Females.....	15	17	11		1											
Barry.....	256	{ Total.....	115	193	92	43	20	9	9	6	7	7	7	4				
		{ Males.....	8	107	67	33	13	4	4	3	2	7	4	4				
		{ Females.....	107	86	25	10	7	5	5	3	5		3					
Bay.....	409	{ Total.....	126	307	190	72	46	28	20	16	6	5		1	1			
		{ Males.....	4	146	127	55	25	16	18	8	4	4		1	1			
		{ Females.....	122	161	63	17	21	12	2	8	2	1						
Benzie.....	73	{ Total.....	36	55	26	13	3	8	2	2		1						
		{ Males.....	3	28	21	11	2	5	1	2								
		{ Females.....	33	27	5	2	1	3	1			1						
Berrien.....	407	{ Total.....	128	324	182	77	41	18	17	8	7	4	5	2	1			
		{ Males.....	11	153	129	46	30	9	11	5	5	2	3	2	1			
		{ Females.....	117	171	53	31	11	9	6	3	2	2						
Branch.....	268	{ Total.....	99	198	106	40	22	16	15	13	7	7	9	3	1			
		{ Males.....	9	104	75	24	14	7	6	9	5	5	6	3	1			
		{ Females.....	90	94	31	16	8	9	9	4	2	2	3					
Calhoun.....	430	{ Total.....	140	305	191	95	45	25	17	20	8	6	3	4		1		
		{ Males.....	3	161	116	67	30	15	11	12	5	3	3	3		1		
		{ Females.....	137	144	75	28	15	10	6	8	3	3		1				
Cass.....	174	{ Total.....	71	136	57	27	23	11	5	6	3	2	5	2				
		{ Males.....	7	73	43	15	15	8	2	3	2	1	3	2				
		{ Females.....	64	63	14	12	8	3	3	3	1	1	2					
Charlevoix.....	102	{ Total.....	37	74	40	26	10	6	7	2	1		1					
		{ Males.....	1	38	28	17	7	2	5	2	1		1					
		{ Females.....	36	36	12	9	3	4	2									
Cheboygan.....	130	{ Total.....	57	82	60	23	13	14	3	4	2	1	1					
		{ Males.....	4	41	44	16	10	8	2	2	1	1	1					
		{ Females.....	53	41	16	7	3	6	1	2								
Chippewa.....	163	{ Total.....	51	118	86	31	17	15	5	3								
		{ Males.....	1	51	59	25	12	9	4	2								
		{ Females.....	50	67	27	6	5	6	1	1								

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Table 58.—CONTINUED.—Number of persons married, by sex and periods of age.

Counties.	Total marriages, 1894.	Sex of persons married.	Number of persons married, by periods of age, 1894.																Unk.
			Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 +			
Clare.....	62	{ Total..... Males..... Females.....	31 1 30	38 24 14	20 14 6	15 11 4	8 5 3	3 2 1	2 1 1	---	4 2 2	2 1 1	---	1 1 ---	---	---	---		
Clinton.....	220	{ Total..... Males..... Females.....	73 6 67	173 86 87	94 64 30	24 14 10	26 17 9	10 5 5	16 14 2	8 5 6	6 4 2	1 1 1	6 5 ---	2 2 ---	1 1 ---	---	---		
Crawford.....	35	{ Total..... Males..... Females.....	17 3 14	26 13 13	14 9 5	5 5 ---	1 5 1	5 3 2	---	2 2 ---	---	---	---	---	---	---	---		
Delta.....	159	{ Total..... Males..... Females.....	52 3 49	121 50 71	81 60 21	36 25 11	17 12 5	8 7 1	---	3 2 1	---	---	---	---	---	---	---		
Dickinson.....	110	{ Total..... Males..... Females.....	37 1 36	83 44 39	60 37 23	25 16 9	5 5 ---	6 5 1	---	2 1 1	1 1 ---	1 1 ---	---	---	---	---	---		
Eaton.....	305	{ Total..... Males..... Females.....	121 9 112	226 120 106	126 91 35	41 26 15	17 10 7	17 11 6	18 10 8	13 7 6	11 6 5	10 7 3	6 5 1	3 2 1	1 1 ---	---	---		
Emmet.....	110	{ Total..... Males..... Females.....	41 1 40	74 33 41	49 35 14	22 17 5	14 12 2	6 3 3	5 4 1	3 2 3	2 2 ---	2 1 1	---	1 1 ---	1 1 ---	---	---		
Genesee.....	364	{ Total..... Males..... Females.....	135 12 123	287 141 146	164 120 44	49 33 16	24 17 7	16 8 8	14 13 7	13 8 5	6 4 2	13 8 5	5 4 1	2 2 ---	---	---	---		
Gladwin.....	53	{ Total..... Males..... Females.....	36 2 34	39 27 12	12 11 1	5 4 ---	2 2 ---	3 2 3	1 2 1	2 1 ---	1 2 ---	---	1 1 ---	---	---	---	---		
Gogebic.....	82	{ Total..... Males..... Females.....	19 --- 19	63 23 40	52 39 13	20 14 6	5 3 2	---	2 1 1	2 2 ---	---	---	---	---	---	---	---		
Gd. Traverse..	200	{ Total..... Males..... Females.....	76 3 73	144 78 66	80 47 33	53 40 13	21 15 6	13 9 4	2 1 1	7 5 2	3 2 1	---	1 ---	---	---	---	---		
Gratiot.....	281	{ Total..... Males..... Females.....	117 12 105	252 139 113	82 58 24	35 22 13	22 14 8	13 9 4	17 10 7	7 4 3	10 8 2	4 3 1	1 1 ---	2 1 1	---	---	---		
Hillsdale.....	325	{ Total..... Males..... Females.....	104 7 97	288 152 136	104 68 36	43 29 14	35 23 12	16 11 5	14 7 7	13 6 7	10 4 6	9 6 3	10 9 1	3 2 1	1 1 ---	---	---		
Houghton.....	390	{ Total..... Males..... Females.....	118 2 116	311 140 171	204 150 54	89 63 26	33 18 15	9 6 3	7 5 2	4 2 2	2 1 1	2 2 ---	1 1 ---	1 1 ---	---	---	---		
Huron.....	225	{ Total..... Males..... Females.....	81 4 77	168 80 88	118 84 34	38 28 10	24 16 8	8 6 4	6 3 3	3 2 1	3 3 ---	---	1 1 ---	---	---	---	---		
Ingham.....	357	{ Total..... Males..... Females.....	105 7 98	245 123 122	164 98 66	74 53 21	32 20 12	31 14 17	14 9 5	11 5 6	15 9 6	14 10 6	5 5 4	3 3 ---	1 1 ---	---	---		
Ionia.....	321	{ Total..... Males..... Females.....	110 12 98	256 121 135	139 95 44	53 35 18	37 26 11	18 13 5	5 3 2	9 5 4	4 4 ---	5 4 1	5 3 2	---	---	---	---		
Iosco.....	69	{ Total..... Males..... Females.....	25 2 23	48 24 24	38 24 14	9 8 1	7 5 2	8 4 4	1 ---	---	---	---	---	2 1 1	---	---	---		

Table 58.—CONTINUED.—*Number of persons married, by sex and periods of age.*

Counties.	Total marriages, 1894.	Sex of persons married.	Number of persons married, by periods of age, 1894.															Unk.
			Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 +		
Iron.....	22	{ Total.....	10	14	12	2	4	1	1	—	—	—	—	—	—	—	—	
		{ Males.....	1	7	8	2	2	1	1	—	—	—	—	—	—	—	—	
		{ Females.....	9	7	4	—	2	—	—	—	—	—	—	—	—	—	—	
Isabella.....	207	{ Total.....	113	146	64	34	22	9	8	6	5	2	3	—	2	—	—	
		{ Males.....	11	92	46	21	16	3	5	3	5	1	3	—	1	—	—	
		{ Females.....	102	54	18	13	6	6	3	3	—	1	—	—	1	—	—	
Jackson.....	370	{ Total.....	117	282	162	64	44	14	16	13	6	7	12	2	—	1	—	
		{ Males.....	15	135	105	44	24	11	10	7	4	5	8	1	—	1	—	
		{ Females.....	102	147	57	20	20	3	6	6	2	2	4	1	—	—	—	
Kalamazoo.....	390	{ Total.....	106	314	178	78	32	26	15	10	7	8	3	3	—	—	—	
		{ Males.....	9	153	109	52	21	15	11	5	5	4	3	3	—	—	—	
		{ Females.....	97	161	69	26	11	11	4	5	2	4	—	—	—	—	—	
Kalkaska.....	59	{ Total.....	21	38	23	8	9	6	5	1	1	3	1	—	2	—	—	
		{ Males.....	2	19	14	4	7	5	3	1	—	2	—	—	2	—	—	
		{ Females.....	19	19	9	4	2	1	2	—	1	1	1	—	—	—	—	
Kent.....	1,079	{ Total.....	321	622	469	184	146	68	48	30	23	23	16	6	1	1	—	
		{ Males.....	27	382	309	129	96	45	27	18	14	17	11	2	1	1	—	
		{ Females.....	294	440	160	55	50	23	21	12	9	6	5	4	—	—	—	
Keweenaw.....	10	{ Total.....	5	6	5	1	—	—	1	—	—	—	2	—	—	—	—	
		{ Males.....	1	2	5	1	—	—	—	—	—	—	1	—	—	—	—	
		{ Females.....	4	4	—	—	—	—	1	—	—	—	1	—	—	—	—	
Lake.....	42	{ Total.....	20	29	20	5	4	1	1	3	1	—	—	—	—	—	—	
		{ Males.....	2	19	10	4	3	1	—	2	1	—	—	—	—	—	—	
		{ Females.....	18	10	10	1	1	—	1	1	—	—	—	—	—	—	—	
Lapeer.....	242	{ Total.....	86	182	95	36	23	12	12	11	9	7	5	1	3	—	—	
		{ Males.....	2	95	65	25	16	10	4	8	3	6	4	1	3	—	—	
		{ Females.....	84	87	30	11	9	2	8	3	6	1	1	—	—	—	—	
Leelanau.....	60	{ Total.....	22	46	33	11	3	3	2	—	—	—	—	—	—	—	—	
		{ Males.....	—	20	27	7	2	2	2	—	—	—	—	—	—	—	—	
		{ Females.....	22	26	6	4	1	1	—	—	—	—	—	—	—	—	—	
Lenawee.....	379	{ Total.....	104	325	158	49	41	21	21	11	7	11	3	5	1	1	—	
		{ Males.....	6	160	101	35	25	11	12	7	5	8	3	4	1	1	—	
		{ Females.....	98	165	57	14	16	10	9	4	2	3	—	1	—	—	—	
Livingston.....	205	{ Total.....	63	166	94	28	21	10	8	4	10	2	2	1	1	—	—	
		{ Males.....	6	81	61	18	14	7	6	3	5	1	1	1	1	—	—	
		{ Females.....	57	85	33	10	7	3	2	1	5	1	1	—	—	—	—	
Luce.....	26	{ Total.....	12	19	12	6	—	1	2	—	—	—	—	—	—	—	—	
		{ Males.....	—	8	11	5	—	1	1	—	—	—	—	—	—	—	—	
		{ Females.....	12	11	1	1	—	—	1	—	—	—	—	—	—	—	—	
Mackinac.....	62	{ Total.....	24	50	22	15	12	—	1	—	—	—	—	—	—	—	—	
		{ Males.....	—	25	18	12	6	—	1	—	—	—	—	—	—	—	—	
		{ Females.....	24	25	4	3	6	—	—	—	—	—	—	—	—	—	—	
Macomb.....	214	{ Total.....	61	189	100	34	18	7	7	5	2	3	2	—	—	—	—	
		{ Males.....	4	83	75	21	15	2	5	3	2	2	2	—	—	—	—	
		{ Females.....	57	106	25	13	3	5	2	2	—	1	—	—	—	—	—	
Manistee.....	191	{ Total.....	74	134	87	42	21	6	7	3	6	1	—	1	—	—	—	
		{ Males.....	2	63	65	31	13	3	5	2	5	1	—	1	—	—	—	
		{ Females.....	72	71	22	11	8	3	2	1	1	—	—	—	—	—	—	
Manitou.....	9	{ Total.....	2	6	4	2	3	—	1	—	—	—	—	—	—	—	—	
		{ Males.....	—	3	1	2	2	—	1	—	—	—	—	—	—	—	—	
		{ Females.....	2	3	3	—	1	—	—	—	—	—	—	—	—	—	—	
Marquette.....	261	{ Total.....	79	179	158	60	14	17	6	3	1	4	1	—	—	—	—	
		{ Males.....	2	91	96	42	10	12	4	1	—	2	1	—	—	—	—	
		{ Females.....	77	88	62	18	4	5	2	2	1	2	—	—	—	—	—	

PERSONS MARRIED BY PERIODS OF AGE, BY COUNTIES. 165

Table 58.—CONTINUED.—Number of persons married, by sex and periods of age.

Counties.	Total marriages, 1894.	Sex of persons married.	Number of persons married, by periods of age, 1894.																Tot.
			Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 +			
Mason	129	{ Total	47	88	50	23	19	8	2	7	4	1	2	2					
		{ Males	2	48	32	16	13	7	2	3	1	1	2	2					
		{ Females	45	40	18	12	6	1		4	3								
Mecosta	168	{ Total	83	114	71	25	14	4	11	5	4	2		3					
		{ Males	2	69	49	16	10	3	9	5	2	1		2					
		{ Females	81	45	22	9	4	1	2		2	1		1					
Menominee	149	{ Total	53	118	78	33	7	3	2	1	2	1							
		{ Males	1	54	57	27	4	2	2	1		1							
		{ Females	52	64	21	6	3	1			2								
Midland	94	{ Total	39	80	31	16	10	7	1	2	2								
		{ Males	1	45	21	10	7	6	1	2	1								
		{ Females	38	35	10	6	3	1			1								
Missaukee	75	{ Total	34	60	21	9	15	2	5	4									
		{ Males	1	32	19	7	8	1	4	3									
		{ Females	33	28	2	2	7	1	1	1									
Monroe	271	{ Total	95	224	122	40	27	12	6	5	6	3	1	1					
		{ Males	7	108	87	30	17	7	5	2	5	1	1	1					
		{ Females	88	116	35	10	10	5	1	3	1	2							
Montcalm	300	{ Total	129	240	94	46	38	17	6	12	9	4	2	3					
		{ Males	5	131	67	34	25	14	5	7	5	3	1	3					
		{ Females	124	109	27	12	13	3	1	5	4	1	1						
Montmorency	17	{ Total	10	10	6	3	4	1											
		{ Males		8	4	2	3												
		{ Females	10	2	2	1	1	1											
Muskegon	218	{ Total	77	158	104	35	27	11	6	5	5	5	1	1		1			
		{ Males	5	75	72	27	17	5	5	3	4	3	1			1			
		{ Females	72	83	32	8	10	6	1	2	1	2		1					
Newaygo	156	{ Total	76	113	55	20	15	10	5	4	2	4	6	1		1			
		{ Males	4	62	44	16	11	4	4	2	3	3	5	1		1			
		{ Females	72	51	11	4	4	6	1	2	2	1	1	1					
Oakland	279	{ Total	64	231	134	44	26	13	15	15	6	3	3	3			1		
		{ Males	3	103	89	29	16	7	10	12	2	2	3	3					
		{ Females	61	128	45	15	10	6	5	3	4	1					1		
Oceana	151	{ Total	69	98	53	31	8	9	9	9	7	5	3		1				
		{ Males	4	57	38	23	4	6	3	5	5	3	2		1				
		{ Females	65	41	15	8	4	3	6	4	2	2	1						
Ogemaw	60	{ Total	25	50	24	12	6		3										
		{ Males		25	19	10	4		2										
		{ Females	25	25	5	2	2		1										
Ontonagon	58	{ Total	15	47	30	13	4		5	1	1								
		{ Males		20	20	11	3		3		1								
		{ Females	15	27	10	2	1		2	1									
Osceola	122	{ Total	60	87	46	21	8	11	3	5	3								
		{ Males	2	47	36	16	7	8	2	2	2								
		{ Females	58	40	10	5	1	3	1	3	1								
Oscoda	18	{ Total	12	13	6	3	1				1								
		{ Males	1	10	3	3					1								
		{ Females	11	3	3		1												
Otsego	51	{ Total	25	40	24	6	3	3	1										
		{ Males	1	23	17	5	2	3											
		{ Females	24	17	7	1	1		1										
Ottawa	261	{ Total	68	219	129	30	29	12	7	11	3	8	3	1	1	1			
		{ Males	5	101	88	19	18	6	6	8	2	4	1	1	1	1			
		{ Females	63	118	41	11	11	6	1	3	1	4	2						

Table 58.—CONCLUDED.—Number of persons married, by sex and periods of age.

Counties.	Total marriages, 1894.	Sex of persons married.	Number of persons married, by periods of age, 1894.															
			Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 +	Def.	
Presque Isle..	37	{ Total..... Males..... Females.....	18 18 18	28 14 14	17 15 2	2 2 4	5 4 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	
Rosecommon..	16	{ Total..... Males..... Females.....	6 6 6	18 9 9	4 4 4	1 1 1	3 2 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	
Saginaw.....	602	{ Total..... Males..... Females.....	164 5 159	452 197 255	300 202 98	118 89 29	66 44 22	31 21 10	24 16 14	25 16 9	14 9 5	5 4 1	4 4 1	1 1 1	1 1 1	1 1 1	1 1 1	
Sanilac.....	256	{ Total..... Males..... Females.....	101 2 99	182 90 92	128 92 36	47 35 12	18 13 5	8 6 2	12 7 5	8 5 3	3 2 1	1 1 1	2 1 1	1 1 1	1 1 1	1 1 1	1 1 1	
Schoolcraft..	66	{ Total..... Males..... Females.....	27 27 27	41 17 24	34 28 6	21 16 5	3 3 1	2 1 1	2 2 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	
Shiawassee...	327	{ Total..... Males..... Females.....	110 9 101	244 129 115	133 75 58	64 45 19	28 22 6	21 11 10	8 5 3	20 10 10	12 9 3	5 5 2	6 4 2	1 1 1	2 2 1	2 2 1	2 2 1	
St. Clair.....	458	{ Total..... Males..... Females.....	124 4 120	384 165 219	211 153 58	79 61 18	43 27 16	17 9 8	19 13 6	7 4 3	10 6 3	7 4 3	6 4 2	5 4 1	1 1 1	1 1 1	1 1 1	
St. Joseph....	212	{ Total..... Males..... Females.....	71 9 62	149 74 75	96 54 42	33 27 6	28 18 11	14 10 4	11 6 5	10 5 5	5 4 1	3 3 1	1 1 1	3 2 1	1 1 1	1 1 1	1 1 1	
Tuscola.....	258	{ Total..... Males..... Females.....	109 7 102	198 103 95	111 82 29	33 26 7	16 8 3	11 8 5	16 11 5	6 4 4	4 3 1	5 3 2	5 4 1	1 1 1	1 1 1	1 1 1	1 1 1	
Van Buren....	254	{ Total..... Males..... Females.....	94 9 85	181 92 89	86 67 19	43 20 23	37 25 12	11 6 5	18 13 5	13 7 7	14 7 7	5 4 1	4 3 1	1 1 1	1 1 1	1 1 1	1 1 1	
Washtenaw...	309	{ Total..... Males..... Females.....	66 2 64	244 109 135	166 105 61	61 40 21	28 19 9	23 12 11	16 12 4	4 3 1	3 2 2	4 3 1	3 2 1	1 1 1	2 2 1	2 2 1	2 2 1	
Wayne.....	2,062	{ Total..... Males..... Females.....	427 15 412	1,676 713 963	1,106 722 386	384 280 124	228 147 81	119 74 45	98 61 37	51 36 15	33 21 12	23 18 5	11 9 2	4 4 2	1 1 1	2 2 1	2 2 1	
Wexford.....	139	{ Total..... Males..... Females.....	51 3 48	89 48 41	54 35 19	26 18 8	24 14 10	11 8 3	14 7 7	3 2 1	2 1 1	2 1 1	2 1 1	2 1 1	1 1 1	1 1 1	1 1 1	

STATISTICS OF DIVORCE IN MICHIGAN.

The importance of the knowledge of the amount and movement of divorce in this State requires scarcely any argument. It is the special subject in vital statistics that carries, perhaps, the greatest interest to all classes of the community, as knowledge of the abnormal, monstrous and pathological commonly does, in contradistinction to the interest attaching to the commonplace occurrences of normal and healthy social life. In Michigan at the present time there are probably about 2,500 applications for divorce per annum, of which about two-thirds are finally granted. Nearly one divorce is granted for every ten marriages that occur. These figures, while much less than the corresponding ones for certain States of the Union, are sufficiently high to show to what a large extent divorce has become a part of our social life.

SOURCES OF DATA OF DIVORCE IN MICHIGAN.

The State of Michigan collects no statistics of divorce. It is an unfortunate omission which greatly impairs the completeness of the data collected under the State system of registration and presented in these reports. Not only are statistics of divorces of the highest value in themselves, but they are essential to the thorough knowledge of the statistics of marriages and births. Many divorced persons remarry—may, indeed, be divorced and remarried several times under our facile laws—and it is evident that the marriage-rate may be apparently much higher from the remarriage of divorced persons, without there being any corresponding increase in the number of married couples in the State. Such a condition of affairs would evidently affect the ratio of fecundity of marriage, besides the direct effect of unsettled marital relations upon the birth of children. Again the prevalence of divorce is a factor in the number of children, frequently of tender ages, thrown upon the charity of the community, and whose mortality is probably higher than if they had not been deprived of the protection and parental care of the home.

In default, therefore, of any official returns to this Department of the divorces granted in Michigan, certain data on the subject collected by the United States government and by private individuals are herewith submitted. The general results, with rates per 1,000 population for each year and ratios per 1,000 marriages, are given in Table 59, and in Table 63 the details of the divorces granted, applied for, etc., are given for the counties of the State as ascertained by the inquirers.

(a.) The first and most authoritative source of information concerning divorces granted in Michigan consists of the investigation made by Hon. Carroll D. Wright, U. S. Commissioner of Labor, according to act of Congress, and published in the valuable "Report on Marriage and Divorce" in 1889. Several editions have been subsequently issued, and the work is obtainable by applying to the Commissioner of Labor. The years included extend from 1867 to 1886, inclusive, and the facts chiefly recorded are the total numbers of divorces granted during each of these years in each county of the State. As the same data were collected for all of the other states and territories, it is evident that the relative prevalence of divorce up to the year 1886 is exhibited.

(b.) On a somewhat different plan, Mr. Melvin A. Root, of Bay City, has collected statistics of divorce in Michigan for the years 1883, 1884, 1893 and 1894, thus showing the movement during a ten-year period. Instead of taking the number of decrees granted during the calendar year as a basis, Mr. Root ascertained the number of applications made for divorce in each of the counties for the years stated, and then followed the subsequent history of these applications, stating how many were granted, how many were otherwise disposed of, and how many were still pending at the time of the inquiry. His results are given in full in Table 63.

As a matter of importance in regard to the method of the investigation, upon which the accuracy of the results so largely depends, the circular form issued by Mr. Root to the county clerks, and also a special notice issued by the Secretary of State for the purpose of aiding Mr. Root to secure returns from certain counties, are given below. After many difficulties, returns were finally secured from every county in the State, although the investigator was compelled to personally visit some county seats in order to examine the records.

Blank used by Mr. Root for collection of data.

TO THE COUNTY CLERK:

Will you kindly aid in a compilation of statistics on the subject of Divorce, by filling in the numbers for your County, under the several years, in the items as given below, so a comparative statement may be shown of the last two years with like years ten years earlier, and send the statement at your early convenience in enclosed envelope, to Melvin A. Root, Bay City, Mich.

Statistics in.....County, Michigan, for years as follows:

		1883.	1884.	1893.	1894.
<i>Number of Marriages Recorded,</i>	- - -
<i>Number of Divorce Suits Begun,</i>	- - -
<i>Number of Decrees Granted,</i>	- - -
<i>Number of Cases otherwise Disposed of,</i>	-
<i>Number of Suits Still Pending,</i>	- - -

Population of County in 1884,; same in 1894,

[Copy of circular.]

MICHIGAN,
DEPARTMENT OF STATE. }
Lansing, July 5th, 1895.

To County Clerks:

Correct statistics of Divorce are scarcely less important to a complete system of vital statistics than those of marriages, births and deaths. Indeed, the returns of marriages and births in this State are largely affected by the number of Divorces granted. It is therefore to be regretted that there is no provision of the registration law for the return and compilation of the Divorces that annually occur in this State.

Mr. Melvin A. Root has undertaken an investigation of the statistics of Divorces in Michigan for certain years, on behalf of the National Association for the Advancement of Woman, whose Vice-President for Michigan, Mrs. Lucinda H. Stone, of Kalamazoo, delegated him the task. The results of the investigation are not private property,—no one receives pay for the work, and no profit is made when published,—but are contributed for the use of all students of the important questions involved. For this reason, and since the compiler has generously offered the results of his compilation for early use in the State Registration Report (Vital Statistics), whose official data the statistics of Divorces will supplement in certain very important particulars, I earnestly request that all County Clerks will afford him whatever assistance they can conveniently give.

Very respectfully,

WASHINGTON GARDNER,
Secretary of State.

(c.) The third source of information was that afforded by the efforts of Mr. George P. Stevens, County Agent of Eaton County, who obtained from the clerks of the several counties of the State (with four exceptions) the number of applications for divorce and of decrees granted for the year 1893. Mr. Stevens's object was eminently practical, his inquiry resulting from reflection upon the many cases of dependent children brought to his notice as county agent in consequence of the breaking up of families by divorce.

The demand that evidently exists in the community for reliable information in regard to divorce is forcibly shown by the efforts of these gentlemen, at the cost of much time and no inconsiderable expense, to collect such data for themselves. The opportunity is taken here to acknowledge their courtesy in supplying information, and the freedom with which they placed the results of their investigations at the service of the State.

MOVEMENT OF DIVORCE IN MICHIGAN.

The number of divorces granted in Michigan for each year for which statistics are obtainable from any of the several sources mentioned above, is shown in Table 59, together with comparisons of the divorces granted in each year with the marriages solemnized, and with the population of the State. As the data for individual years are liable to peculiarities from various causes, the averages of five-year periods are also given, by which may be more correctly judged the general tendency of the divorce movement.

It appears from an examination of this table that the rates of marriage in this State have shown little change for the four five-year periods compared. A slight rise was shown for the period 1881-85, but the rate for the succeeding period, 1886-90, was a little less than that for the first period compared, 1871-75. A steady increase in the rate of divorce may be noted for each of the three corresponding periods for which statistics are available; starting with 1.1 per 1,000 population in 1871-75, it rose to 1.3 and 1.5 in the next two quinquennial periods successively. As the marriage-rate remained nearly stationary, as noted, it is evident that the ratio of divorces to marriages rose correspondingly, viz., from 63.0 to 76.0 and 79.4 divorces per 1,000 marriages.

The relative accuracy of the data received from the different sources may be approximately determined from inspection of this table. While the number of divorces assigned by Mr. Root to the year 1883, for instance, is not strictly comparable with the United States Labor Commissioner's returns, since the former relates to the number of decrees granted on suits commenced in 1883, the latter to the number of decrees granted in that year on suits begun in 1883 or any year previous, we have no other basis of comparison than to take these expressions as identical, and in fact, unless the divorce-rate very rapidly changed about 1883, there will probably be little error involved in so doing. We conclude, then, that the number of divorces obtained by Mr. Root for 1883 requires to be increased by 10.9 per cent to equal the true number that occurred, as reported to the government, and in like manner that Mr. Root's data for 1884 should be increased by 20.4 per cent to equal the true number of divorces. The average correction for the two years compared is 15.2 per cent.

Table 59.—Marriages and divorces in Michigan for the years 1867-94; with ratios of divorces to marriages, marriage-rates and divorce-rates per 1,000 population, and quinquennial averages of the data. The statistics of divorces are chiefly from the report of the U. S. Commissioner of Labor, supplemented by data from private sources for certain years. For the years 1887-92 data are entirely wanting.

Years and five-year periods.	Population.	Marriages.	Divorces (U. S. Commissioner of Labor).	Excess of marriages over divorces.	Divorces per 1,000 marriages.	Persons married per 1,000 population.	Persons divorced per 1,000 population.
1867.....	963,902	4,312	449	.....	.....	.....	.9
1868.....	1,067,288	8,997	509	8,188	58.5	16.5	.9
1869.....	1,120,673	8,459	493	7,966	58.3	15.1	.9
1870.....	1,184,059	9,791	554	9,237	56.6	16.5	.9
1871.....	1,221,552	10,805	630	9,975	59.4	17.4	1.0
1872.....	1,259,045	10,752	620	10,132	57.7	17.1	1.0
1873.....	1,296,538	11,897	705	11,192	59.3	18.4	1.1
1874.....	1,334,031	12,235	794	11,461	64.8	18.4	1.2
1875.....	1,384,515	11,851	864	10,987	72.9	17.1	1.2
1876.....	1,435,000	11,913	800	11,113	67.2	16.6	1.1
1877.....	1,485,484	11,899	927	10,972	77.9	16.0	1.2
1878.....	1,535,968	12,880	998	11,887	77.1	16.8	1.3
1879.....	1,586,453	13,892	1,110	12,782	79.9	17.5	1.4
1880.....	1,636,937	14,935	1,149	13,786	76.9	18.2	1.4
1881.....	1,691,117	15,894	1,313	14,581	82.6	18.8	1.6
1882.....	1,745,298	16,830	1,335	15,495	79.4	19.3	1.5
1883.....	1,799,478	17,174	{ 1,383	15,791	80.5	19.1	{ 1.5
			{ a 1,247	a 15,927	a 72.6		{ a 1.4
1884.....	1,853,658	15,989	{ 1,239	14,750	77.5	17.3	{ 1.3
			{ a 1,026	a 14,900	a 64.4		{ a 1.1
1885.....	1,893,697	15,885	1,227	14,658	77.2	16.8	1.3
1886.....	1,933,735	16,665	1,339	15,326	80.4	17.2	1.4
1887.....	1,978,774	17,179	.....	.....	.....	17.4	.....
1888.....	2,013,812	17,297	.....	.....	.....	17.2	.....
1889.....	2,053,851	18,317	.....	.....	.....	17.8	.....
1890.....	2,093,889	18,664	.....	.....	.....	17.8	.....
1891.....	2,130,827	19,244	.....	.....	.....	18.1	.....
1892.....	2,167,765	20,107	.....	.....	.....	18.6	.....
1893.....	2,204,708	19,197	{ a 1,606	a 17,592	a 83.6	17.4	{ a 1.4
			{ b 1,379	b 17,818	b 71.8		{ b 1.3
1894.....	2,241,641	18,220	a 1,392	a 16,826	76.5	16.3	a 1.2
Av. 1871-75.....	1,299,136	11,472	723	10,749	63.0	17.7	1.1
Av. 1876-80.....	1,535,968	13,104	996	12,108	76.0	17.1	1.3
Av. 1881-85.....	1,796,650	16,354	1,299	15,055	79.4	18.2	1.4
Av. 1886-90.....	2,013,812	17,624	.....	.....	.....	17.5	.....

a Data collected by Mr. Root.

b Data collected by Mr. Stevens.

We cannot, unfortunately, apply this correction to the data obtained by Mr. Root for the years 1893 and 1894, for which we have no official statistics, in order to ascertain the probable true number of divorces in Michigan in these years, and consequently whether the ratio of divorces to marriages and to population has continued to increase in recent years. The reason for the failure of the comparison may be seen in the following table:

Table 60.—*Analysis of the number of divorce suits begun in Michigan during each of the years 1883, 1884, 1893 and 1894, showing number and per cent of decrees granted, cases otherwise disposed of, and cases still pending. (Data supplied by Mr. Melvin A. Root, Bay City.)*

Divorces.	1883.		1884.		1893.		1894.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Divorce suits begun	1,921	100.0	1,807	100.0	2,584	100.0	2,500	100.0
Decrees granted	1,247	64.9	1,026	63.8	1,608	62.2	1,392	55.7
Cases otherwise disposed of....	270	14.1	232	14.4	250	9.7	213	8.5
Suits still pending	404	21.0	349	21.7	726	28.1	895	35.8

It is evident from an examination of Table 60 that a much larger proportion of suits still pending is included in the data for the years 1893 and 1894 than for the years 1883 and 1884. This excess of unsettled cases, although partially compensated for by the deficiency of cases "otherwise disposed of" for the latter two years, is due to the fact that the collection of the statistics was chiefly conducted in the early part of 1895, when the final history of many of the cases begun in 1894 could not be obtained. For this reason the total number of decrees granted is decidedly too low for 1894, and somewhat too low for 1893, as compared with the years 1883 and 1884. The percentage of correction would require to be considerably more than 15.2 per cent as determined for those years.

We can evade this difficulty by using the figures representing the numbers of divorce suits begun, which should be entirely free from the objections noted. In 1883-84 were begun 3,528 divorce suits, according to Mr. Root, and there were 2,622 divorces granted for the same time according to the United States figures, representing a percentage of divorces granted to suits begun of 74.3 per cent. This ratio appears fairly reasonable, remembering that in Table 59 the decrees finally granted from among suits still pending would somewhat increase the proportion of decrees to applications. From three selected counties in Michigan for the twenty years 1867-86, the proportion of decrees to applications was 65.6 per cent. If the same ratio holds good for 1893-94 as for 1883-84, then 3,777 of the 5,084 divorces applied for in the latter two years would be granted, or an average of 1,839 divorces per annum. This number corresponds to a divorce-rate of 1.7 persons divorced per 1,000 population, or 101.0 divorces per 1,000 marriages annually performed.

These rates, while high, are about what we should expect if the frequency of divorce had continued to increase during the years since 1886 at a rate similar to that shown during the years 1867 to 1886. The ratio of divorces to marriages is enhanced from the fact that there has been a marked falling off in the marriage-rate during the past few years owing to the pressure of hard times, which cause would in itself undoubtedly tend to increase the number of divorces. It is probably safe to

say that the ratio of divorces to marriages reaches 8 per cent in this State even during ordinary times of prosperity, while under exceptional circumstances it may reach or exceed the 10 per cent limit. In round numbers, one divorce is annually granted in Michigan for about every ten marriages performed.

COMPARATIVE PREVALENCE OF DIVORCE IN MICHIGAN, OTHER PARTS
OF THE UNITED STATES AND FOREIGN COUNTRIES.

The comparisons of divorces annually granted in Michigan with the corresponding numbers of marriages solemnized are not entirely satisfactory as leading to stable statistical conclusions. Commissioner Wright in his Report denounces the method as a "vicious" one, since "the marriages celebrated each year cannot be compared scientifically with the divorces drawn from the whole volume of marriages celebrated in the past thirty or forty years, many of which even took place in foreign countries." This ratio is much in use, however, as a convenient first step in comparing the frequency of divorce in different states or countries, and might be further improved by basing the ratio of divorces upon the marriages performed at a prior period equal to the average duration of marriage before divorce. This interval, as based upon the entire statistics collected for the United States for the twenty years 1867-86, is 9.17 years,* and the divorces for 1894, therefore, might be compared with the marriages of 1875, or, probably with little error, with those of 1884. Quinquennial averages should be used rather than the numbers for individual years, and thus amended, this ratio would seem less objectionable. It would be, in fact, perfectly analogous to the approved method of calculating the fecundity of marriage, in which the births of a given year or period are compared with the marriages of a prior year or period remote from the former by an interval equal to the average duration of marriage to the birth of the mean child (see Part II, p. 114). The element of marriages celebrated previous to arrival in this country would have to be dealt with in each case.

The divorce-rate based upon the total population, while well enough in comparing the movement of divorce in the same state or country for a short period of time, cannot well be used to compare the frequency of divorce in different states or countries, since the proportions of married couples, from which all divorces are derived, vary widely. The preferable mode of comparison is to state the ratio of divorces annually granted to the total number of married couples in the community, from whose numbers the divorced couples are taken. In the following table such rates are given for Michigan for each of the census years (State census) 1874, 1884 and 1894, in which the numbers of married couples (taken as one-half the number of married persons) are known, and also for certain foreign countries. The rate for the United States as a whole is also given, and it will be noted that while our country exceeds any other in the list in the frequency of divorce, Michigan stands considerably above the average of the United States as a whole in this unenviable respect. The rate for Michigan for 1894 is marked with a "?," the number of divorces being estimated from Mr. Root's data.

* In Switzerland, where the amount of divorce more nearly corresponds to that in the United States than in any other European country, the average duration of marriage prior to divorce was 9.8 years. This was the result of observation for fifteen years, 1876-90.—*Statistique de la Suisse, 108e tiraison, Berne, 1895.*

Table 61.—*Divorces and separations in various countries.**

Country.	Divorces and judicial separations.		Country.	Divorces and judicial separations.	
	Number per annum.	Rate per 100,000 married couples.		Number per annum.	Rate per 100,000 married couples.
Michigan, 1874.....	794	306.3	Western Australia.....	2	27.8
Michigan, 1884.....	1,239	335.4	Sweden and Norway.....	297	27.0
Michigan, 1894.....	1,889	418.7	New South Wales.....	40	26.4
United States.....	23,472	208.0	New Zealand.....	23	26.1
Switzerland.....	920	195.5	Victoria.....	27	16.9
Denmark.....	635	184.7	Tasmania.....	3	14.6
France.....	6,245	80.5	Queensland.....	6	11.1
Germany.....	6,161	77.7	Russia in Europe.....	1,789	11.1
Roumania.....	541	61.5	Italy.....	556	10.6
Holland.....	399	47.7	South Australia.....	5	10.4
Austria.....	1,718	44.0	United Kingdom.....	508	8.6
Belgium.....	290	31.4	Canada.....	12	1.6

* The data presented in this table are mostly for the year 1885; for the Australasian colonies, the average of the five years ended in 1890, and for the United States, the year 1890. The original source of the statistics was a pamphlet entitled "A Divorce Problem," by Prof. Willcox, of Cornell University. The figures themselves are taken from this table as reprinted in the *Victorian Year-Book*, 1894, together with the Australasian statistics added by the editor of that publication. Those for Michigan have been calculated in this Department for the years stated. It is possible in some cases that judicial separations may not be included.

The distribution of divorces over this country may be learned in yet another way, namely, by the proportion of divorced persons to married persons as ascertained by census. The United States census of 1890 was the first in which statistics of conjugal condition were compiled, the results of which relative to divorced persons are presented in Table 62. This table shows the per cent of divorced persons to married persons in the country as a whole and in each geographical division. Under the figures for the North Central division, in which Michigan is included, are also inserted the separate figures for this State. It appears that the general proportion of the divorced to the married is about one-half (0.54) of one per cent for the United States; that it is less than the average in the Eastern and Southern, greater than the average in the Central and Western states, in the latter, especially, the rate being over double the average. The proportion of divorced persons in Michigan is larger than that of the division to which it belongs, which includes the states of Ohio, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas,—among these certain states notorious for laxity of their divorce laws.

Besides the percentages of divorced persons in the aggregate population, the distribution among whites of native and foreign ancestry, foreign-born white, and among the colored may be learned from this table. These division also correspond in a measure to the distinctions of social condition. In general it may be noted that the amount of divorce is greatest in the highest class of the population, the pure American stock (American for at least two generations), is less in the descendants of the foreign-born, and least in those actually born upon foreign soil. It is high also among the negro population.

It might be supposed at first glance that the fact that the ratio of divorces to marriages in Michigan has been year after year from 5 to 10 per cent, while the proportion of divorced persons to married persons was only three-fourths of 1 per cent, would require some explanation. The duration of divorce is much less than the average duration of marriage, one or both of the divorced persons soon remarrying in many cases. A part of the discrepancy may be due to the fact that the census returns of divorced persons are less correct than those in regard to other civil conditions, for obvious reasons. However this may be it would not affect the indications as to the relative prevalence of divorce in the different states.

Table 62.—Percentage of divorced persons to married persons for the United States, geographical divisions, and Michigan, according to the U. S. census of 1900.

Geographical divisions.	Aggregate population.	Native white—native parents.	Native white—foreign parents.	Foreign white.	Persons of negro descent.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
The United States.....	0.54	0.61	0.50	0.34	0.67
North Atlantic.....	0.38	0.54	0.30	0.15	0.45
South Atlantic.....	0.31	0.28	0.33	0.22	0.38
North Central.....	0.68	0.82	0.58	0.43	1.36
—Michigan.....	0.75	1.05	0.72	0.42	1.27
South Central.....	0.55	0.41	0.53	0.43	0.85
Western.....	1.13	1.29	1.21	0.92	2.45

DIVORCES IN MICHIGAN BY COUNTIES.

In Table 63 are presented the original data collected by Mr. Root for the years 1883, 1884, 1893 and 1894; by Mr. Stevens for the year 1893, and, for the sake of comparison, the United States Labor Commissioner's returns for 1883 and 1884. The absence of figures opposite any county in columns 2, 3, 4, 5, 18, and 19, shows that no divorces were applied for or granted, as the case may be. In columns 20 and 21, in four instances marked by ?'s, no returns were obtained. No columns of this table are directly comparable for individual counties except Nos. 4 and 20, and these exhibit many discrepancies in the numbers of suits stated to have been commenced in 1893,—a result quite to be expected in unofficial returns depending upon the goodwill (often very precarious) of the clerks of the 84 counties of the State. The general results, however, are in reasonable accordance, and whether one set of figures or the other be taken, show the great importance of the subject at present in Michigan. The statistics of divorces as given by counties in this table may be compared with the corresponding statistics of marriages given in Table 45, and in previous reports.

Table 63.—Comparison of the statistics of divorces in Michigan for the years 1883, 1884, 1893 and 1894, as derived from several sources.

1	State and counties.	Mr. Melvin A. Root.										U. S. Commis- sioner of Labor.		Mr. George P. Stevant.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Number of divorce suits begun.		Number of decrees granted.				Number of cases other- wise disposed of.				Divorces granted.			Com- menced.	Granted.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Table 63.—CONCLUDED.—Comparison of the statistics of divorces in Michigan for the years 1883, 1884, 1893 and 1894.

Counties.	Mr. Melvin A. Root.										U. S. Commissioner of Labor.		Mr. George P. Stevens.												
	Number of divorce suits begun.					Number of decrees granted.					Number of cases otherwise disposed of.		Number of suits left pending.					Divorces granted.		Com-menced.		Granted.			
	2 1883.	3 1884.	4 1893.	5 1894.	6 1893.	7 1884.	8 1893.	9 1894.	10 1883.	11 1884.	12 1893.	13 1894.	14 1883.	15 1884.	16 1893.	17 1894.	18 1883.	19 1884.	20 1893.	21 1893.					
Hillsdale.....	53	34	34	32	30	19	25	10	2	1	2	2	21	15	8	20	18	22	30	15					
Houghton.....	4	4	7	8	3	2	7	7	1	2	4	7	3	8	1	1	3	10	7	5					
Huron.....	10	19	6	8	5	7	4	6	2	4	1	1	15	11	25	31	11	10	68	17					
Ingham.....	50	42	68	56	32	28	42	25	3	3	1	3	8	10	18	25	25	35	27	27					
Ionia.....	32	33	50	48	23	21	28	20	1	2	4	3	8	10	18	25	35	35	27	27					
Iosco.....	6	9	10	9	4	9	9	4	---	---	---	1	2	1	4	4	6	6	7	7					
Iron (d).....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2					
Isabella.....	25	14	20	22	18	10	14	17	7	4	4	2	23	34	26	52	13	12	19	12					
Jackson.....	87	78	69	102	64	39	38	42	3	5	5	8	6	8	38	19	47	44	70	12					
Kalamazoo.....	41	38	97	77	32	29	57	54	3	1	2	4	6	8	38	19	32	29	97	46					
Kalkaska.....	12	13	4	8	5	4	11	2	5	1	2	---	3	1	7	7	7	11	5	3					
Kent.....	85	57	238	243	53	41	148	125	5	3	13	11	27	13	77	77	130	98	180	90					
Keweenaw.....	1	1	1	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1	1	---					
Lake.....	16	6	2	4	1	1	1	---	3	2	1	---	5	2	1	1	8	11	5	5					
Lapeer.....	42	18	35	33	20	12	19	17	4	3	2	3	18	3	14	13	17	10	36	23					
Leelanau.....	3	4	6	5	2	4	5	5	1	1	1	---	18	20	19	33	2	34	6	1					
Lenawee.....	59	62	55	65	39	39	31	31	2	3	5	1	18	4	5	7	34	39	24	25					
Livingston.....	13	11	21	16	13	7	13	8	---	---	---	---	---	---	---	---	11	13	20	11					
Lucas (e).....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---					
Macatawa.....	6	---	---	2	2	---	8	2	2	---	---	---	2	2	2	2	6	2	7	7					
Macomb.....	15	12	21	31	9	3	9	16	6	9	1	3	9	3	11	12	8	6	24	8					
Manistee.....	24	16	38	26	15	13	24	15	---	---	---	---	7	3	14	11	27	12	35	25					
Manitou.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---					
Marquette.....	15	6	13	4	8	3	9	2	2	---	---	---	6	3	6	7	10	7	12	8					
Mason.....	25	14	13	16	19	10	6	9	1	1	---	---	7	3	4	2	16	17	13	2					
Meosco.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---					
Menominee.....	23	29	21	22	19	19	14	14	4	10	5	5	---	---	---	---	24	20	17	8					
Midland.....	5	4	7	8	3	---	1	3	---	---	---	---	2	4	6	4	4	1	4	4					
Missaukee.....	6	14	12	11	4	13	9	6	2	1	1	1	1	---	---	---	6	6	12	5					
Muskegon.....	1	1	9	18	1	1	7	11	2	---	---	---	---	---	---	---	1	1	10	5					
Muskegon.....	21	19	26	30	19	18	22	28	2	1	4	2	---	---	---	---	19	12	34	33					

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Montealm.....	50	34	46	30	24	16	34	20	3	1	1	2	23	17	11	8	31	19	30	29
Montgomery.....	1	1	3	3	3	24	2	2	1	1	1	1	1	1	1	1	1	1	1	1
Muskegon.....	54	13	54	49	30	20	32	26	26	14	15	5	5	7	7	18	37	37	59	31
Nevadago.....	36	19	11	19	30	17	10	17	6	2	2	1	1	6	12	20	21	16	20	20
Oakland.....	39	28	38	44	27	19	24	23	3	1	2	1	9	6	12	20	27	20	39	24
Oceana.....	20	18	24	23	14	13	16	16	3	2	4	3	3	3	4	4	13	16	25	18
Orenaw.....	2	8	6	2	2	3	4	2	2	2	2	2	2	2	2	2	1	2	5	4
Ontonagon.....	14	11	19	20	6	6	12	7	8	5	7	8	8	8	2	5	9	7	20	1
Oscoda.....	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	9
Otsego.....	2	8	5	6	1	1	4	6	1	2	2	1	1	3	3	6	1	2	3	3
Ottawa.....	28	17	24	15	12	9	13	9	6	5	2	1	10	3	9	6	14	9	24	13
Presque Isle.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Rochester.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Saginaw.....	60	68	86	78	35	34	44	32	2	3	3	4	23	31	39	37	35	35	83	28
Sault.....	14	9	13	20	9	7	9	9	1	1	1	4	4	2	3	8	13	3	13	13
Shelburne.....	2	2	13	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1
Shickadee.....	39	32	66	74	16	20	38	35	14	5	7	6	9	7	27	33	15	16	14	11
St. Clair.....	50	39	45	47	24	20	28	24	4	2	1	2	12	8	16	21	28	23	70	70
St. Joseph.....	23	23	30	40	13	14	22	33	10	9	8	7	7	8	16	21	13	8	35	31
Tareola.....	46	83	92	24	43	18	32	17	2	7	4	1	3	15	8	6	28	25	32	28
Van Buren.....	34	32	37	34	27	22	35	24	12	1	1	2	5	3	8	13	23	24	37	48
Waukenaaw.....	30	46	45	57	54	29	23	51	13	19	17	25	37	33	126	130	136	49	800	150
Wayne.....	145	127	355	307	96	77	202	109	13	17	25	18	7	6	6	13	130	136	800	150
Wexford.....	14	14	21	27	7	8	12	14	1	3	3	3	7	6	6	13	13	11	22	11

a Organized in 1885.
b Organized in 1891.

c Organized in 1887.
d Organized in 1888.

e Organized in 1887.
f No report.

NEEDED LEGISLATION FOR THE REGISTRATION OF DIVORCES IN MICHIGAN.

In the preceding remarks and statistics the magnitude and increasing importance of the divorce question in this State have been sufficiently illustrated. It has also been shown that our sole knowledge of the actual facts pertaining to divorce in Michigan comes from the investigation of the general government or from the occasional efforts of private persons, and that we have not at present any official statistics collected by the State government. It goes without saying that such a condition of affairs requires a remedy, and that both on account of the intrinsic importance of the subject in itself, and also on account of the important bearing that reliable divorce statistics have upon other branches of vital statistics, provision should be made at an early date for the proper return and publication of divorce statistics in this State. Fortunately such statistics can be very readily secured, it being necessary only to provide that the clerks of courts authorized to grant divorces shall annually or oftener make returns to the Secretary of State for compilation and publication in the *Registration Report*, and that they shall receive a reasonable compensation for so doing. Such returns could well be made on or before March 1 of each year for the calendar year preceding, and on blanks furnished by the Secretary of State, as in the case of births, marriages and deaths, arranged for the record of the essential personal and statistical data.

The Massachusetts statute for the registration of divorces, enacted in 1882, provided for the return of the following facts: number of libels pending at the beginning of the year; the number of libels filed within the year; the number of divorces granted; the number of divorces refused; the number of libels contested; the number of libels uncontested; the alleged cause for divorce in each case; the sex of the libellant and the length of time the parties have been married. In this list certain items now regarded as of essential importance in the statistical study of divorce are omitted, and the present requirements of an advanced divorce registration system may be better judged from the following letter on the subject by Rev. Samuel W. Dike, Corresponding Secretary of the National Divorce Reform League. Dr. Dike is a recognized authority on divorce legislation and statistics, having first suggested the government investigation of marriage and divorce,* as well as having largely planned and assisted in the execution of the work itself. His remarks, therefore, are of special value in regard to the details advisable in a new registration law, and should be carefully considered in drafting any proposed law for this State.

* Report of the U. S. Commissioner of Labor on Marriage and Divorce, Washington, 1889.

Auburndale, Mass., Jan. 1, 1896.

C. L. WILBUR, M. D.,

Division of Vital Statistics, Department of State, Mich.:

DEAR SIR—Permit me to express the earnest hope that Michigan will add divorce statistics to its present otherwise excellent system of vital statistics.

At the request of the president of our American Statistical Association I sent a paper on the general subject of the statistics of marriage and divorce in various countries to the meeting of the International Statistical Institute in 1892, to which I refer you for suggestions as to the points to be included. For a practicable plan, it may be wise to confine the inquiries to those points on which libels for divorce now furnish information, as was done in Massachusetts when the provision for divorce statistics was made. I would add to the facts now required in libels of divorce such as would give the age of the parties divorced, their nationality, race, religious faith, occupation and perhaps economic condition, the number and age of their children, and the dates and causes of the dissolution of all former marriages. All these are included in the divorce statistics of many European countries. Some of these inquiries would be objectionable to us on account of our well-known reluctance as a people to give facts relating to certain things like religious affiliations. But these are all most desirable in themselves. Marriage licenses should, as in Colorado at least, always note previous conjugal condition, whether divorced, widowed or single, and in case of divorce give the date and legal ground of its dissolution. This would give us, as in Connecticut already, the data for determining the number of divorced persons who remarry, and the time elapsing after divorce before remarriage. Returns of deaths should also specify the conjugal condition of the decedent. In this way we get important knowledge of social laws, as well as information to guide us in legislation.

I need say little of the great value of such a system of statistics. Facts relating to the termination of the marriage relation are the necessary complement of those regarding its beginning in marriage and its fruitfulness in births. All admit the supreme importance of the family to the State and to industrial interests as well as to the concerns of religion and education. The collection of authentic information regarding it is not less important than statistics relating to agriculture, manufactures, commerce, schools and churches or any other of our social phenomena. I have seen in the past fifteen years much waste of discussion and in effort at legislation on divorce for the want of information of this sort. Even highly intelligent people went far astray for years in their demand for uniform marriage and divorce laws on the ground held by many that most divorces were obtained in practical violation of state laws by the use of the courts of other states than those of their own residence. Now through the government report we know that such divorces are a small part of the entire number, and the problem of uniformity has consequently assumed an entirely new aspect. Amendment of the constitution of the United States for the purpose of uniformity is now treated very differently.

Much light has been thrown by that report on the relation of intemperance, of the presence of children and of other things to divorce. The states now need to take up the subject and provide for statistics as comprehensive and accurate in information as possible regarding both marriage and divorce. The vital statistics of Michigan have long been highly regarded for their excellence and scientific value. I hope that she will make the further improvement now suggested.

Sincerely yours,

SAMUEL W. DIKE,

Cor. Sec'y National Divorce Reform League.

PART IV.—DEATHS IN MICHIGAN DURING THE YEAR 1894.

The year 1894 was characterized by a remarkably low death-rate. The total number of deaths registered, including still-births, was only 20,959, corresponding to a rate of 9.3 per 1,000 population as enumerated by the State census of 1894. This is the lowest rate recorded since 1885 (see Table 8, Part I), and is nearly one per 1,000 lower than the mean rate of the preceding five years.

The low death-rate of the year may be explained, in part, by the gradual cessation of the prevalence of epidemic influenza, which, beginning in 1890, has from that time to the present year annually caused a large number of deaths directly, besides undoubtedly increasing the proportion of mortality from acute respiratory diseases, diseases of the circulatory system, etc. Contrary to what might have been expected, consumption has not prevailed more extensively during the season of the influenza epidemic, according to the returns for Michigan, but has markedly decreased. It would seem that many deaths of consumptives, perhaps accelerated by the intercurrent of influenza, have been improperly reported from the latter cause of death, so that it is quite possible that the real influence of "la grippe" on the death-rate may have been somewhat exaggerated. The numbers of deaths registered from influenza for recent years are as follows: 1889, 176; 1890, 1,084 (the crest of the epidemic wave in this State); 1891, 1,076; 1892, 907; 1893, 555; 1894, 402. Prior to 1889 only a very few deaths, perhaps two or three on the average, were annually recorded. The great impression made on the popular mind, and the fact that the returns of causes of deaths in Michigan are not derived as a rule from physicians' certificates, but from the laity, and are recorded by supervisors quite ignorant, as a class, of proper methods of discrimination between the actual and the assigned causes of death, render it probable that "la grippe" will continue to figure in the Michigan Registration Reports long after the cessation of the actual disease.

While the diminution in the number of deaths registered from influenza during 1894 is not in itself sufficient to account for the very low death-rate of the year, it is not improbable that the recent prevalence of this disease has, indirectly, largely caused such reduction. For several years an unusually high mortality has been recorded for the aged and for those past the middle period of life. The mortality of infants was rather high, especially at the onset of the epidemic, but the great brunt of its effect has been undoubtedly borne by those somewhat advanced in life. As a necessary consequence, the average age of the population has been somewhat reduced, and the age-distribution after the passage of the epidemic is more favorable than at its arrival. Besides its general selective action with reference to ages of decedents, it has probably borne more heavily upon the weak, upon invalids, and upon those in defective physical condition, thus weeding out the elements of the population that afford the greatest mortality.

That the low death-rate of 1894 is probably a rebound from the high death-rates induced by epidemic influenza of the immediately preceding years, is indicated by the wide prevalence of low mortality rates. The International Vital Statistics included in the Report of the Registrar-General of England for 1894, show that the death-rates were the lowest since the history of registration in the United Kingdom, England and Wales, Scotland, Denmark, Germany, Prussia, Holland, Belgium, and Italy. The data for Sweden, Austria, Hungary, and France had not been received for the year, so that it is quite possible that one or more of these countries may also show minimum rates. The death-rate of Massachusetts was less than that for any previous year since 1886. Chicago, despite the presence of small-pox, had the lowest death-rate recorded since the beginning of registration in 1851. It is probable that other states and cities of this country would make an equally favorable showing, were exact statistics available, and that Michigan has thus merely shared in the general improved conditions affecting the United States, Europe, and probably the entire North Temperate Zone.

In part, however, the decreased death-rate in Michigan for the year 1894 has been due to a decline in the deaths from dangerous communicable diseases, and especially those acute infectious diseases comprised under that title which constitute the "zymotic" diseases of Dr. Farr's classification. Consumption showed a slight increase in deaths for the year, as did also other forms of tubercular disease. Diphtheria caused a smaller number of deaths, 642, than have been reported from this cause for any year since 1877. The same statement is true of diphtheria and croup taken together, the aggregate number of deaths in 1894 being only 822. The deaths from scarlet fever were only 163, the smallest number for any year in the history of registration in Michigan. Typhoid fever and measles were considerably lower than the average for recent years, and whooping-cough was less than in 1893 and about the same as in the years 1891-92. Only small-pox prevailed more extensively than usual of the acute infectious diseases, 85 deaths from this cause having been reported in the State.

The above statements as to causes of death are merely given as suggestive of the general character of the mortality of the year. As in previous Reports, this portion is divided into two sections, viz.: Section I.—The *incidence of deaths* by months, sex, age, color, nativity, nationality, geographical location, etc.; and Section II.—The *causes of deaths*. It should not be understood that the second division fails to study the factors mentioned in the preceding group, but its distinctive feature is that it classifies them with reference to particular diseases, instead of simply showing their relation to total mortality.

It may be noted that in the above list nationality is given for the first time for decedents in Michigan as well as nativity; the former is much more definite and is of greater statistical value. At the close of Section II some tables are given relating to occupations of decedents, for the reason that the subject is chiefly studied with respect to the causes of death affecting occupations.

Besides the tables contained in this part of the report, the tables in Part I should be referred to, especially Tables 8, 9, 15, 16 and 17, for comparative statements of the deaths registered for previous years; death-rates with and without inclusion of still-births; deaths and death-rates by counties, and variations in the returns of deaths, by counties, between the years 1893 and 1894; and lastly the deaths returned for each township and ward in the State contrasted with the deaths enumerated for the nearly coincident census year by the last State census.

SECTION I.—INCIDENCE OF DEATHS IN MICHIGAN DURING THE YEAR 1894.

The tables in this section contain statements in regard to the incidence of deaths in the State during the year 1894, arranged to show the following particulars: (1) Deaths by months; (2) number and proportion of each sex among the decedents; (3) deaths by ages of decedents; (4) nativity; (5) nationality; (6) color and race. Herewith is presented a brief statement of the more prominent facts contained in this section:

SUMMARY OF THE REGISTRATION OF DEATHS FOR THE YEAR 1894.*

Total number of deaths returned,	20,959
Death-rate per 1,000 estimated population,	9.3
(Actual number of deaths that occurred, estimated at	33,534
Actual death-rate per 1,000, estimated at	14.9)
Decrease of deaths returned for 1894 (20,959) from the number returned for 1893 (21,982),	1,023

In the above statement of deaths, still-births are included to the number of 1,002. Excluding these, as is customary in most mortality reports, we have:

Total number of deaths, still-births excluded,	19,957
Death-rate, still-births excluded,	8.9

Of the 20,950 deaths in 1894, there were:

Males,	11,159
Females,	9,744
Sex unknown or unspecified (51 of these still-births),	56

With respect to age at death, there were, of the 19,680 deaths at specified ages, exclusive of still-births:

Deaths of infants under 1 year of age,	4,181 or 21.2 per cent
Deaths of children under 5 years of age,	6,018 or 30.6 per cent
Deaths of children under 1 year of age per 1,000 living births,	95.9

The average age at death, according to the returns for 1894, and exclusive of still-births, was as follows:

Both sexes and all nativities,	34.2 years
Males,	35.2 years
Females,	33.2 years
Native-born (persons),	27.2 years
Foreign-born (persons),	55.2 years

Classifying the decedents by color and race, there were:

White,	20,596
Colored (black, 198; mulatto, 53; Indian, 98),	349
Color unknown or unspecified,	14

By nativity, there were, including still-births:

Native-born decedents,	15,718
Foreign-born decedents,	4,542
Nativity unknown or unspecified,	699

* See also Summary at beginning of Section II relating especially to Causes of Death registered for 1894.

By nationality of the foreign-born, including all nationalities having over 250 decedents returned for the year, we have:

Canada,	1,181
England and Wales,	527
Ireland,	623
Germany,	1,295

Synopsis of tables relating to the incidence of deaths by months, sex, age, nativity nationality, and color of decedents.

Table.	Incidence of deaths in Michigan, 1894.
<i>A. General tables.</i>	
64.	Deaths returned, by months, for ten years, 1885-94; with average for the ten-year period.
65.	Comparison of deaths returned, by months, according to the State registration and the State census for the census year 1893-94.
66.	Deaths returned, by sex and periods of age, during the year 1894.
67.	Deaths returned, by sex, for fifteen years, 1880-94, with rates per 1,000 population of same sex, and ratios of deaths of males to deaths of females; with average for the ten-year period 1885-94.
68.	Death-rates per 1,000 population at important periods of age, per cents of deaths at those ages to total deaths at specified ages, and deaths of infants under one year of age per 1,000 births, for each of the years 1870-94; with quinquennial averages.
69.	Death-rates, by sex, at certain important periods of age, 1894.
70.	Death-rates, by nativity, at certain important periods of age, 1894.
71.	Average ages at death, by nativity and sex, for each of the years 1885-94, with inclusion of still-births (and for the years 1892-93, with exclusion of still-births); also average for the ten-year period.
72.	Nativity of decedents for the years 1885-94, with average of the ten-year period.
73.	Nationality of decedents, 1894, with rates per 1,000 population of like nationality.
74.	Deaths by months, at certain periods of age, showing the relations of the deaths in each month and age-period to total deaths in 1894 in corresponding months and age-periods.
<i>B. Detailed tables.</i>	
75.	Statement by counties of the number of deaths returned for each month, 1894, showing sex of decedents.
76.	Statement by counties of the number of deaths returned at each five-year period of age (and at each year of age under five), showing sex of decedents.
77.	Showing by ages in periods of years, and by sex, the number of deaths returned for each month of the year 1894.
78.	Showing by ages in years (by months under one year), and by sex, the number of deaths returned for each month of the year 1894.
79.	Statement by counties of the number of deaths returned of each color during the year 1894, specifying sex.
80.	Statement by counties of the number of deaths returned of each nativity during the year 1894, specifying sex.
81.	Statement by counties of the number of deaths returned of each nationality during the year 1894, specifying sex.
82.	List of townships reporting that no deaths occurred in 1894, showing population by State census in that year.
83.	List of delinquent townships (those making no returns of deaths) for the year 1894, showing population in same year.

DEATHS RETURNED BY MONTHS.

In Table 64 the number of deaths returned by months for 1894 may be compared with each of the years preceding since 1885, and also with the average of the ten-year period 1885-94. This average, it must be noted, has not been corrected for increase of population, so that the general relations of the deaths returned in the several months of the same year or period can only be compared.

It will be observed that the statement of deaths by months is presented in much simpler form and with apparently some loss of detail as compared with previous reports. Former tables relating to deaths by months and quarters contained elaborate calculations of the percentage relations of the several months and quarters to total mortality during the year, and also similar statements for the preceding ten-year periods. Indeed, up to 1891, a second series of tables was presented giving the corresponding percentage relations of the months for deaths after "correction" by a large and variable percentage supposed to represent the deaths omitted during the process of enumeration. Such tables, with their monthly percentages of total deaths, were extremely misleading, since the accuracy of registration varies greatly between the earlier and the latter months of the registration year; and in the case of the "corrected" tables, which sought to estimate the relative deficiencies of the several months, and make compensation for them, satisfactory assurance could not be obtained that this object was accomplished in any given case.

So far as the distribution of mortality through the different months of the year is concerned, it should be remembered that Table 64 refers solely to deaths *returned*, not to all the deaths that actually occurred. Could we know the actual distribution of deaths through the year, it would, doubtless, be quite different from the order here given. Comparing the number of deaths returned for the months of any registration year, it will be observed that, in general, larger numbers are returned for the latter months of the year, which are nearer to the date of enumeration in May of the year following, and that smaller numbers are returned for the early months of the year which are more remote from that date.

Table 64.—*Deaths returned, by months, for the years 1885-94, inclusive; with average for the ten-year period. (Still-births included).*

Years.	Total for year.	Months.												
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
1885.....	16,646	1,151	1,267	1,421	1,474	1,286	1,185	1,363	1,436	1,559	1,492	1,362	1,564	56
1886.....	18,187	1,065	1,093	1,462	1,396	1,376	1,281	1,461	1,887	1,889	1,761	1,615	1,841	60
1887.....	19,482	1,249	1,274	1,535	1,599	1,472	1,405	1,915	2,055	1,916	1,699	1,554	1,743	66
1888.....	21,764	1,416	1,585	1,865	1,909	1,858	1,627	1,789	2,169	1,978	1,848	1,642	2,012	66
1889.....	20,315	1,409	1,266	1,676	1,585	1,454	1,389	1,677	2,214	2,025	1,894	1,712	1,951	63
1890.....	21,642	1,745	1,599	1,776	1,807	1,704	1,633	1,849	2,082	1,892	1,808	1,739	2,027	31
1891.....	22,079	1,486	1,385	1,774	2,074	1,732	1,560	1,678	2,147	1,978	2,011	1,860	2,351	48
1892.....	21,729	2,152	1,687	1,735	1,878	1,700	1,491	1,678	1,942	1,802	1,892	1,788	1,949	45
1893.....	21,982	1,413	1,454	1,789	1,668	1,744	1,616	1,686	2,042	2,166	1,909	1,818	2,605	63
1894.....	20,959	1,404	1,272	1,641	1,727	1,705	1,619	1,668	2,024	2,047	2,007	1,845	1,975	25
Average, 1885-94.	20,479	1,447	1,388	1,667	1,712	1,608	1,480	1,677	2,000	1,925	1,832	1,694	2,002	52

Maxima in bold-faced type; minima in italics.

The months having the greatest numbers of reported deaths (maxima) and those having the least numbers (minima) are indicated by full-face and *italic* type, respectively. August and December are the most fatal months of the year in Michigan, according to the returns, and January and February the most favorable. For exact comparison, even if the returns were approximately accurate, the months should be reduced to average length; the calendar month February, concerning which the above statement is made, is shorter than the other months, and so would appear as a minimum, if it really had the average mortality. As a matter of fact, as indicated by the censuses of 1884 and 1894, statistics of sickness, and local mortality registration, there are probably more deaths in Michigan during January in the average year than in December. How this discrepancy between the truth and the showing made by the registration returns of deaths is brought about, will be illustrated in the next table by means of the mortality statistics covering the same time collected by the State census of 1894.

DEATHS BY STATE REGISTRATION AND CENSUS COMPARED.

The State of Michigan, in its efforts to ascertain the monthly and seasonal mortality of the State, may be compared to a man who seeks to estimate the capacity of a reservoir by means of two leaky measures, which have to be carried some distance before their contents are noted. Of course neither the one or the other will afford a true knowledge of the capacity of the reservoir; the most accurate conclusion will be based upon observation of the one which has the fewest leaks or which is allowed to leak for a shorter time before its contents are measured.

This homely and seemingly ridiculous comparison is a true picture of the systems of enumeration of vital statistics employed in this State for thirty years past. These systems are identical in principle and are employed by the State Registration (annually) and by the State census (decennially), besides which the United States census also makes a decennial enumeration in the same manner. The leakage occurs from the fact that births and deaths are not registered immediately upon their occurrence, but are supposed to be collected at the close of the registration year (census) or some time thereafter (State registration system).

These statements are not matters of conjecture; they are conclusively shown in Table 65, which compares month for month the deaths returned to the State Department, under the registration law of 1869, and the deaths collected by the census of 1894, for the same months. If both census and enumeration were accurate, the two sets of returns would correspond. As it is, the registration shows an excess of deaths over the census for seven months of the census year, while the census exceeds the registration for five months. The numerical excess of the census for the year is considerably greater, however, since the differences in favor of the census represent an eleven months' earlier enumeration, while those in favor of the registration system represent an advantage of only one month for the latter.

DEATHS AND DEATH-RATES BY SEX.

Table 66 contains statements of the deaths that occurred in Michigan during 1894, with reference to sex and periods of age of decedents. In Table 67 the distribution of deaths by sex in 1894 may be compared with previous years, from 1880 to 1893 inclusive, and also with the average of the ten-year period, 1885-94.

VITAL STATISTICS OF MICHIGAN, 1894.

Table 63.—Comparison, by months, of the deaths enumerated by the State census and State registration for the census year, June, 1893—May, 1894, inclusive; showing the lapse of time before registration in each case. (Still-births included).

Character and time of enumeration of deaths.	Total for year, 1893-94.	Deaths by months, June, 1893-May, 1894.											
		1893.						1894.					
		June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.
<i>Time elapsed before enumeration,—months</i>	6.5	12	11	10	9	8	7	6	5	4	3	2	1
State census enumeration, June, 1894*.....	23,674	1,495	1,532	1,920	1,975	1,777	1,700	2,330	2,129	1,894	2,248	2,233	2,331
<i>Time elapsed before enumeration,—months</i>	10.5	11	10	9	8	7	6	5	-----	-----	-----	-----	-----
State registration, May, 1894*.....	21,600	1,616	1,665	2,042	2,166	1,909	1,818	2,605	-----	-----	-----	-----	-----
<i>Time elapsed before enumeration,—months</i>	-----	-----	-----	-----	-----	-----	-----	-----	16	15	14	13	12
State registration, May, 1893*.....	-----	-----	-----	-----	-----	-----	-----	-----	1,404	1,272	1,641	1,727	1,705
<i>Excess of time in favor of census,—months†</i>	4	-1	-1	-1	-1	-1	-1	-1	11	11	11	11	11
Excess of deaths enumerated in favor of census †.....	2,074	-121	-113	-122	-191	-132	-118	-275	725	612	607	536	646
Per cent by which registration returns require to be increased to equal census returns.....	9.6	-7.5	-6.7	-6.0	-8.8	-6.9	-6.4	-10.6	51.6	48.1	37.0	32.2	37.9

* Unknown month excluded.

† Excess in favor of the State registration system is indicated by the minus sign (-).

Table 66.—*Exhibiting, by sex, and by age in periods of years, the number and proportion of persons returned as having died in Michigan during the year 1894. (Still-births included).*

Age in years and periods of years.	Number of deaths, 1894.				Per cent of deaths at each age to total of all ages.			Per cent of deaths of each sex to total of both sexes.†				Excess of the sexes by number.		Males to 100 females.
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Males.	Females.	Excess.		Males.	Females.	
										Males.	Females.			
All ages	20,959	11,159	9,744	56	100.0	100.0	100.0	53.4	46.7	6.7	.....	1,415	.....	115
Still-births.....	1,002	549	402	51	4.8	4.9	4.1	2.6	1.9	.7	.....	147	.....	137
Under 1*	4,181	2,298	1,881	2	19.9	20.6	19.3	11.0	9.0	2.0	.....	417	.....	122
1 to 2.....	924	497	427	.....	4.4	4.5	4.4	2.4	2.0	.4	.....	70	.....	116
2 to 3.....	418	215	202	1	2.0	1.9	2.1	1.0	1.0	.....	.....	13	.....	106
3 to 4.....	259	123	136	.....	1.2	1.1	1.4	.6	.7	.....	.1	.....	13	90
4 to 5.....	236	127	109	.....	1.1	1.1	1.1	.6	.5	.1	.....	18	.....	117
All under 5*.....	6,018	3,260	2,755	8	28.7	29.2	28.8	15.6	13.2	2.4	.....	505	.....	118
5 to 10.....	760	399	361	.....	3.6	3.6	3.7	1.9	1.7	.2	.....	38	.....	111
10 to 15.....	490	241	249	.....	2.3	2.2	2.6	1.2	1.2	.....	.....	8	.....	97
15 to 20.....	768	336	432	.....	3.7	3.0	4.4	1.6	2.1	.....	.5	.....	96	78
20 to 25.....	943	425	518	.....	4.5	3.8	5.3	2.0	2.5	.....	.5	.....	93	82
25 to 30.....	813	361	452	.....	3.9	3.2	4.6	1.7	2.2	.....	.5	.....	91	80
30 to 35.....	776	378	398	.....	3.7	3.4	4.1	1.8	1.9	.....	.1	.....	20	95
35 to 40.....	796	394	402	.....	3.8	3.5	4.1	1.9	1.9	.....	.....	8	.....	98
40 to 45.....	656	309	347	.....	3.1	2.8	3.6	1.5	1.7	.....	.2	.....	38	89
45 to 50.....	718	379	339	.....	3.4	3.4	3.5	1.8	1.6	.2	.....	40	.....	112
50 to 55.....	776	449	327	.....	3.7	4.0	3.4	2.1	1.6	.5	.....	122	.....	137
55 to 60.....	787	451	336	.....	3.8	4.0	3.4	2.2	1.6	.6	.....	115	.....	134
60 to 65.....	998	536	412	.....	4.8	5.3	4.2	2.8	2.0	.8	.....	174	.....	142
65 to 70.....	1,005	573	432	.....	4.8	5.1	4.4	2.7	2.1	.6	.....	141	.....	133
70 to 75.....	1,141	646	495	.....	5.4	5.8	5.1	3.1	2.4	.7	.....	151	.....	131
75 to 80.....	987	538	404	.....	4.7	5.2	4.1	2.8	1.9	.9	.....	179	.....	144
80 to 85.....	741	413	328	.....	3.5	3.7	3.4	2.0	1.6	.4	.....	85	.....	126
85 to 90.....	339	183	156	.....	1.6	1.6	1.6	.9	.7	.2	.....	27	.....	117
90 to 95.....	129	63	66	.....	.6	.6	.7	.3	.3	.....	.....	3	.....	95
95 to 100.....	32	19	13	.....	.2	.2	.1	.1	.1	.....	.....	6	.....	146
100 and over.....	7	3	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	75
Unknown ages..	277	159	116	2	1.3	1.4	1.3	.8	.6	.2	.....	43	.....	137

* Excluding still-births.

† Unknown sex excluded.

Table 66 presents certain details in regard to the relative numbers of the sexes who died at certain ages during the year 1894. Male decedents outnumber the female decedents in every period of age except in those in which child-bearing, and the causes of death incident thereto, increase the mortality of the latter sex. As noted under the preceding table, the males form the larger portion of the population, so that a numerical excess of male decedents would be expected to occur at each age. Whether the mortality rate in proportion to the number of each sex at specified periods of age, was greater for either sex at certain periods of age, requires a statement of the number of inhabitants, by sex, at each period of age. Rates for each sex at certain important periods of age are given in Table 69, and, also, in Table 71, the relative mortality of the sexes among native and foreign-born decedents, as measured by the average age at death.

Table 67.—Deaths in Michigan, by sex, for each of the years 1880-94 inclusive, with death rates per 1,000 population of same sex, and ratios of deaths of males to deaths of females. (Still-births included.)

Year.	Population.		Number of deaths.		Rates per 1,000.		Deaths of males to 100 deaths of females.
	Males.	Females.	Males.	Females.	Males.	Females.	
1880*	862,355	774,582	8,645	7,410	10.0	9.6	116.7
1881	890,372	800,694	10,263	8,910	11.5	11.1	115.2
1882	918,390	826,805	8,713	7,664	9.5	9.3	113.7
1883	946,407	852,917	9,101	7,748	9.6	9.1	117.5
1884*	974,424	879,028	9,589	8,385	9.8	9.5	114.4
1885	993,983	899,542	9,025	7,599	9.1	8.3	119.2
1886	1,013,543	920,055	9,725	8,402	9.6	9.1	115.7
1887	1,033,102	940,599	10,563	8,877	10.2	9.4	119.0
1888	1,052,661	961,082	11,722	10,024	11.1	10.4	116.9
1889	1,072,221	981,596	10,984	9,297	10.2	9.5	118.1
1890*	1,091,780	1,002,109	11,801	9,771	10.8	9.8	120.7
1891	1,106,970	1,021,857	11,908	9,998	10.7	9.8	119.1
1892	1,126,160	1,041,605	11,837	9,809	10.5	9.4	120.7
1893	1,143,350	1,061,353	11,772	10,142	10.3	9.6	116.1
1894	1,160,540	1,081,101	11,159	9,744	9.6	9.0	114.5
Average, 1885-94	1,079,631	991,087	11,050	9,363	10.2	9.4	118.0

* Census years (State censuses, 1884 and 1894).

The number of deaths of males reported for any registration year always considerably exceeds the number of deaths of females. For the year 1894, the ratio was 114.5 to 100,—lower than any year given in Table 67, with the exception of 1882. As the male population of the State is larger than the female population, it is necessary to compare the deaths of each sex, as returned, to the corresponding populations, in order to ascertain whether a higher death-rate actually obtains for males. This is done in Table 67, and the results show that the mortality of males exceeded that of females by .8 per 1,000 population during the ten-year period, 1885-94. For 1894 the difference was .6 per 1,000.

DEATHS AND DEATH-RATES BY AGES.

General reference should be made under this topic to Table 66, preceding, which presents a statement of the age-distribution, by sex, of decedents for the year 1894. In Table 68, rates of mortality have been calculated for certain important periods of age for each of the years 1870 to 1894, inclusive; these rates are based upon carefully estimated populations of the same periods of age for intercensal years. The data contained in this table, between the years 1870-94, are reproduced from Table 50, p. 112, Report for 1892, and are based upon the United States censuses only. For the years 1891-94, the results of the State census of 1894, have also been utilized in estimating populations. It is intended to recalculate this table for a future report, using the State census of 1894 and also, so far as the very insufficient data will permit, the State census of 1874, as well as the last State census, for statements of population, and making a comparison of death-rates by sex, and perhaps by general nativity at each age. In the meantime the figures here given may be taken as fully indicative of the general course of mortality at the age-periods in question.

The ages given above were selected in order to represent the most characteristic periods of human life—infancy, childhood, youth, adult manhood and womanhood, and, lastly, the period of decline. The middle period, that extending from 15 to 64 years, is too long, and would be better subdivided into groups extending from 15 to 24, 25 to 44 (these two groups comprehending the child-bearing period in woman), and from 45 to 64. Such more minute subdivision would probably not materially affect the conclusions drawn above, as is shown by Körösi's studies in determining a standard age-distribution.* His age groups are: (1) Under 1 year; (2) 1 to 20; (3) 20 to 50; (4) over 50. The periods finally adopted by the International Statistical Institute, Berne, 1895, were substantially the same: (1) Under 1 year; (2) 1 to 20; (3) 20 to 40; (4) 40 to 60; (5) 60 years and over. In obtaining the mortality-index, no advantage was gained by employing a greater number of groups, while the time necessary for making the calculations was minimized by using only four or five groups. It is, of course, absurd to calculate the mortality-index of Michigan from the very imperfect data at hand, for comparison with the corresponding mortality-indices of states or countries having accurate systems of registration, but the system may be employed to compare the mortality in Michigan in widely separated years. For example the years 1870, 1880, and 1890, may be standardized on the age distribution of the year 1880 as a basis. The results were given in a table on page 99 of the last Report.

It there appeared that the distribution of ages in the State has not changed sufficiently since 1870 to materially affect the death-rates, which are, therefore, directly comparable. The distribution was slightly more favorable in 1870 (measured by the tendency to a low death-rate) than in 1880, the proportion of persons over 65 years having increased from 2.7 per cent to 3.5 per cent in the decade. This rise in the proportion of the aged was partially counterbalanced by a fall in the percentage of infants from 2.8 to 2.6 per cent, and of children under five years of age from 13.9 to 12.7 per cent. The same changes continue during the decade 1880-90, for which period the tendency to a lower death-rate due to a diminution in the proportions of infants and children seems to have almost exactly balanced the opposite tendency arising from an increased proportion of elderly people in the population.

* "Report of an International Mortality Standard, or Mortality Index," read at the session of the International Statistical Institute, Chicago, 1893, and printed by the American Statistical Association Publications, December, 1893.

Table 68.—*Death-rates per 1,000 population at certain specified periods of age, (with percentage to deaths at all ages) and ratios of deaths under one year of age per 1,000 living births, for each of the years 1870-94, inclusive; with averages for quinquennial periods, and for the quarter century. (Still-births excluded from both births and deaths.)*

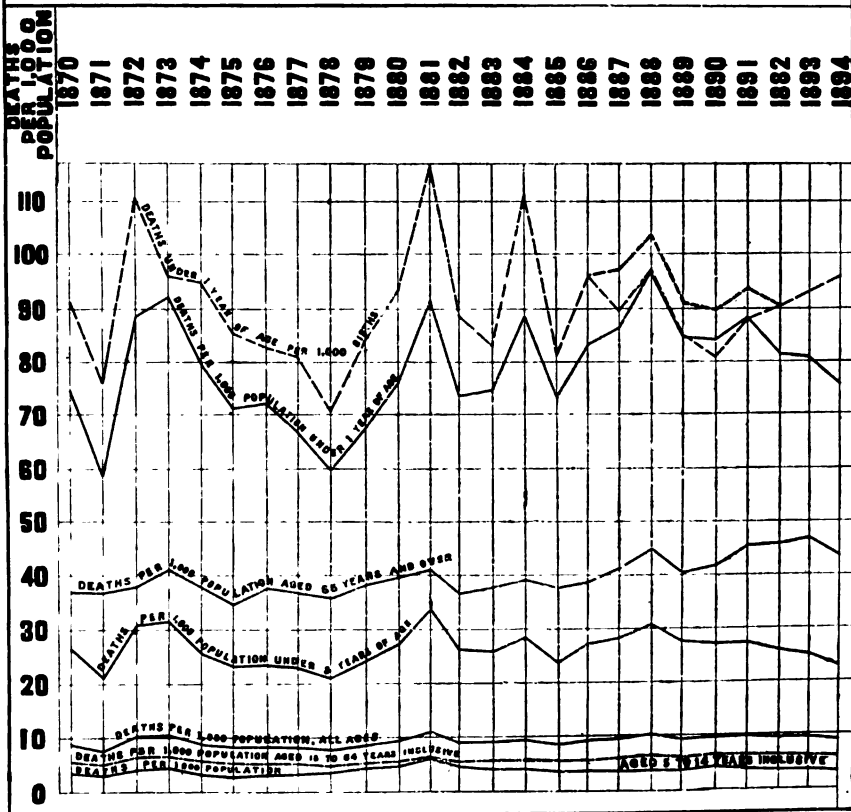
Years and periods.	Death-rates per 1,000 population of corresponding age.						Percentage of deaths at each age to total deaths at all ages.					Deaths of infants under 1 year of age per 1,000 living births.
	All ages.	Under 1 year.	Under 5 years.	5 to 14.	15 to 64.	65 and over.	Under 1 year.	Under 5 years.	5 to 14.	15 to 64.	65 and over.	
1870.....	8.9	74.4	26.5	3.5	5.4	37.0	23.5	42.1	9.6	36.6	11.6	91.3
1871.....	7.7	58.3	21.2	2.9	4.8	36.9	21.2	38.7	9.3	38.1	14.0	75.6
1872.....	10.3	88.7	30.9	4.0	6.3	38.1	23.9	41.6	9.3	37.2	11.9	110.9
1873.....	10.6	92.4	31.7	4.4	6.5	41.2	23.9	40.9	9.9	37.2	12.0	96.0
1874.....	8.8	79.5	25.7	3.0	5.6	38.0	24.6	39.6	8.1	38.7	13.7	94.8
1875.....	8.1	71.2	23.3	2.6	5.1	34.6	24.2	39.1	7.8	39.1	14.0	85.5
1876.....	8.2	72.0	23.5	3.0	5.0	37.9	23.7	39.3	8.5	37.8	15.4	82.8
1877.....	8.1	66.9	23.0	3.2	5.0	37.1	22.1	37.5	9.2	37.8	15.4	81.1
1878.....	7.7	59.7	21.2	3.4	4.6	36.0	20.6	35.8	10.0	38.0	16.0	70.5
1879.....	8.6	67.5	24.3	4.3	5.0	38.5	20.8	36.7	11.7	36.0	15.7	84.1
1880.....	9.4	75.7	27.4	4.6	5.4	39.9	21.5	37.9	11.3	35.7	15.2	93.5
1881.....	11.0	91.7	33.8	6.1	6.1	41.3	21.7	39.0	12.6	34.7	13.7	116.4
1882.....	9.0	73.3	26.1	4.7	5.3	36.8	20.9	36.3	11.9	36.3	15.4	88.7
1883.....	9.0	74.5	25.8	3.8	5.5	37.7	21.1	35.5	9.7	38.5	16.3	83.0
1884.....	9.4	88.5	28.7	3.8	5.5	39.2	23.7	37.4	9.2	36.9	16.5	101.2
1885.....	8.4	72.9	23.6	3.2	5.2	37.6	21.6	34.1	8.6	39.1	18.2	81.2
1886.....	9.0	88.2	27.2	3.3	5.4	38.7	22.8	36.4	8.3	37.5	17.9	96.1
1887.....	9.5	86.1	28.4	3.4	5.7	41.4	22.1	35.5	8.1	37.9	18.5	(97.2) 89.3
1888.....	10.2	97.0	30.8	3.3	6.2	44.9	23.0	35.4	7.2	38.3	19.1	(103.4) 97.2
1889.....	9.3	84.5	27.6	3.2	5.8	40.4	21.7	34.3	7.6	39.1	19.1	(91.1) 84.9
1890.....	9.7	84.0	27.2	3.8	6.1	41.9	20.6	32.4	8.6	39.7	19.4	(89.7) 80.8
1891.....	9.9	86.3	26.9	3.3	6.1	46.0	21.3	32.0	7.5	39.3	21.2	(93.7) 87.8
1892.....	9.6	78.3	25.1	3.2	5.9	47.0	20.2	31.0	7.4	39.3	22.4	90.5
1893.....	9.5	80.8	25.0	3.1	5.9	46.8	21.1	31.1	7.2	39.1	22.4	93.2
1894.....	8.9	75.3	22.8	2.6	5.7	43.5	21.2	30.6	6.4	40.8	22.3	95.9
1870-74.....	9.3	78.7	27.2	3.6	5.7	38.2	23.4	40.6	9.2	37.6	12.6	93.7
1875-79.....	8.1	67.5	23.1	3.3	4.9	36.8	22.3	37.5	9.4	37.7	15.3	80.8
1880-84.....	9.6	80.7	28.4	4.6	5.6	39.0	21.8	37.2	10.9	36.4	15.4	96.6
1885-89.....	9.3	84.7	27.5	3.3	5.7	40.6	22.2	35.1	8.0	38.4	18.6	(93.8) 89.7
1890-94.....	9.5	80.9	25.4	3.2	5.9	45.0	20.9	31.4	7.4	39.6	21.5	(92.6) 89.6
1870-94.....	9.2	78.5	26.3	3.6	5.6	39.9	22.1	36.4	9.0	37.9	16.7	(91.5) 90.1

NOTE.—The numbers in parentheses in the last column of this table represent the figures for infant mortality after correction, as far as possible, for fraudulent returns of births and deaths from Wayne county (Detroit) during the years 1887-91. See Report for 1892, p. 14. It cannot be said that the corrected figures are satisfactory, although they are certainly nearer the truth than those based directly upon the vitiated returns. It is a matter of deep regret that maladministration in one city should invalidate these important ratios for the entire State.

(DIAGRAM I.)

DIAGRAM.-INFANT MORTALITY, AND THE DEATH-RATE AT ALL AGES, AND AT CERTAIN SPECIFIED AGES AND PERIODS OF AGE, IN MICHIGAN.

EXHIBITING FOR EACH OF THE 25 YEARS, 1870-94, ACCORDING TO THE RETURNS,* THE DEATHS OF CHILDREN AGED UNDER ONE YEAR PER 1,000 BIRTHS (INFANT MORTALITY), AND, FOR COMPARISON, THE DEATH-RATES AT EACH OF THE FOLLOWING AGES AND AGE-PERIODS: UNDER ONE YEAR; UNDER FIVE YEARS; 5 TO 14 YEARS INCLUSIVE; 15 TO 64 YEARS INCLUSIVE; 65 YRS AND OVER; ALL AGES.



*FRAUDULENT RETURNS, ESPECIALLY OF BIRTHS, WERE MADE IN DETROIT DURING THE YEARS 1887-91. DR. C. L. WILBUR, CHIEF OF DIVISION OF VITAL STATISTICS, STATE DEPT., HAS CALCULATED CORRECTIONS FOR THOSE YEARS. THE UPPERMOST LINE, FOR THE YEARS 1887-91, REPRESENTS THE DEATHS PER THOUSAND BIRTHS AFTER THE CORRECTIONS HAVE BEEN MADE.

(PLATE 226)

NOTE.—This diagram, constructed by the State Board of Health to illustrate the data contained in Table 68, on the opposite page, was kindly loaned by the Secretary, Dr. H. B. Baker, for use in this Report.

In Table 68, besides the death-rates at important ages, the proportions of deaths at those ages to total deaths registered in each year are also given, as well as the death-rates of infants under 1 year of age per 1,000 births. This last expression is the accepted one for infant mortality, being usually deemed preferable to the death-rate of infants under 1 year of age per 1,000 population of the same age as given in a preceding column of this table. The two series of expressions for infant mortality compare well together, so far as the variations from one year or period to another are concerned, until recent years. Here fraudulent returns of births from Detroit during the years 1887-91, inclusive, to a very large amount, cause the ratio of deaths under 1 year to births to be relatively too low. The figures given in parentheses in the table, and the dotted line in the diagram, represent an attempt to approximate to the truth by eliminating the fraudulent returns, according to the method pointed out in the Report for 1892, p. 14.

The year 1894 was a very favorable one for all classes of the population. The general death-rate, exclusive of still-births, 8.9 per 1,000 population, was lower than any since the year 1885. The rate of infant mortality, as measured by the ratio of deaths of infants under 1 year of age per 1,000 living infants at the census of 1894 under 1 year of age, viz., 75.3 per 1,000, was also lower than that for any preceding year since 1885. The rate of infant mortality, as measured by deaths of infants under 1 year of age per 1,000 births, amounted to 95.9 per 1,000, which was higher than that recorded for any year of registration since 1888. In this statement allowance has been made for false registration of births and deaths during the years 1887-91, so far as the same can be estimated. Children from 5 to 14 years died at the rate of 2.6 per 1,000, or less numerously than in any year since 1875, when the ratio was the same; in no year given in the table has the mortality of this class been more favorable than in 1894. The year was also fairly favorable for adults between the ages of 15 and 64, the death-rate of this class, 5.7 per 1,000 population of like age, being lower than any since 1887. Many years prior to 1887, however, show a lower rate than the year 1894. It may be noted that the percentage of deaths at this period to deaths at all ages, 40.8 per cent, was higher than for any previous year. Lastly, the death-rate of the aged, those of 65 years and over, was 43.5 per 1,000 population of that age. This rate was lower than any since the first epidemic of influenza in 1890, but, like the rates at this age for all recent years, is considerably higher than the rates that formerly prevailed for persons over 65 in Michigan.

The general tendency of the variations in mortality in Michigan at each of the several age-periods during the time covered by the State system of registration, may be conveniently studied by means of averages for quinquennial periods, as given in Table 68, and graphically shown in the diagram on the page opposite to that table. We observe that there has been little variation in the general death-rate of the State, especially during the last three quinquennials. The lines representing adult mortality, 15-64, and the mortality of children at approximate school age, 5-14, also closely follow the general curve of mortality at all ages; the latter, however, shows a distinct maximum for the period 1880-84, due to the very fatal epidemic of diphtheria, which reached its greatest prevalence in 1881. The five-year period 1875-79 was more favorable with respect to a low rate of mortality, than any other of the consecutive five-year periods; the minimum at this point is marked in the curves of every age-period represented. From 1875-79 to 1880-94, the rate of mortality of children under 5 years of age increased, but from the latter period to the present time a slight diminution in mortality has been observed. The course of infant mortality (under 1 year of age) was distinctly upward from 1875-79 to 1885-89; from 1885-89 to 1890-94, a decrease in the infantile death-rate has manifested itself. The rate of death of the aged has steadily risen from 1875-79 to

the present time, and between the last two periods stated, 1885-89 to 1890-94, the increase has been especially marked as a consequence of the prevalence of epidemic influenza.

DEATH-RATES BY SEX AT IMPORTANT AGE-PERIODS.

In Table 69, a statement is given of the population, distinguished as to sex, of Michigan, according to the State census of 1894. This population taken in the middle of the year 1894, affords an exact basis of comparison for the deaths registered during the year. While it is known that the registration of deaths is imperfect, there is no evidence to show that the registration of deaths of either sex or at any age-period is especially so, and, therefore, the relative indications of this table may be accepted as correct.

The death-rate of males at all ages is higher than that of females, being as 9.1 to 8.6. A similar relation uniformly exists, as shown by the comparison of male and female death-rates for previous years in Table 67. The excess of male mortality is, perhaps, related to the excess of male births, the usual ratio of births of males to births of females in this State being about 108 to 100; such a relation, if it exists, would tend to the production of something like equality in the proportions of the two sexes in the population. For the first year of life the death-rate of male infants is markedly higher than that of female infants, the rates being 80.9 and 69.3 per 1,000, respectively. Between the ages of 1 to 4 years, inclusive, the male death-rate is slightly more favorable, as compared with the female death-rate, than for all ages. From 5 to 14 years the death-rates of males and females are exactly the same. For the next two periods, 15-29 and 30-44, comprehending the child-bearing epoch, the female death-rate exceeds the male death-rate by 1 per 1,000 population. Above 45 years, the mortality of males again exceeds that of females, and as age increases the disproportion becomes even more marked.

Table 69.—*Showing, by sex, the death-rates in Michigan at certain periods of age for the year 1894. (Still-births and unknown sex excluded).*

Periods of age.	Population, 1894.		Deaths, 1894.		Death-rates per 1,000 population, 1894.	
	Males.	Females.	Males.	Females.	Males.	Females.
All ages.....	1,160,540	1,081,101	10,610	9,342	9.1	8.6
Under 1 year.....	28,395	27,157	2,298	1,881	80.9	69.3
1-4.....	106,436	101,991	962	874	9.0	8.6
Under 5 years.....	184,831	129,149	5,260	2,755	24.2	21.8
5-14.....	242,187	236,519	640	610	2.6	2.6
15-29.....	311,899	304,724	1,122	1,402	3.6	4.6
30-44.....	239,229	208,907	1,081	1,147	4.5	5.5
45-64.....	177,066	154,931	1,865	1,414	10.5	9.1
65 and over.....	54,428	46,365	2,483	1,898	45.6	40.9
Unknown age.....	950	507	159	116	167.4	228.8

DEATH-RATES BY NATIVITY AT IMPORTANT AGE-PERIODS.

In the same way that death-rates were given in the preceding table for each sex at certain important age-periods, so in Table 70 an effort is made to present the death-rates at the same periods of age for each nativity. The data on this subject are not entirely satisfactory for several reasons: (1) The term nativity, which distinguishes the population and decedents only as native-born, foreign-born, or of unknown nativity, is too general; it would be preferable, if the census data permitted, to study the separate nationalities. (2) Children of purely foreign parentage, although born in this State, should be distinguished from native children of native parents. This is really the vital distinction in the practical study of these statistics, and is also one, unfortunately, that our registration law entirely ignores, no data collected bearing upon it. (3) The number of decedents, especially those of foreign-birth in the early age-periods, are so few that accidental variations affect the results. In the table the cases chiefly open to this objection have been marked with an asterisk.

Taking the figures, however, as they stand, but remembering that they require confirmation by comparison of other years, we see that the death-rate of the native-born, 8.8 per 1,000 population, is higher than that of the foreign-born, 8.0 per 1,000. This is chiefly due to the greater apparent mortality at early ages, due to imperfect returns of foreign-born children. It is noteworthy that the death-rate of the foreign-born exceeds that of the native-born at only one age-period, namely from 45 to 64.

Table 70.—*Showing, by nativity, the death-rates in Michigan at certain periods of age for the year 1894. (Still-births and unknown nativity excluded).*

Periods of age.	Population, 1894.		Deaths, 1894.		Death-rates per 1,000 population, 1894.	
	Native-born.	Foreign-born.	Native-born.	Foreign-born.	Native-born.	Foreign-born.
All ages.....	1,670,786	570,855	14,716	4,542	8.8	8.0
Under 1 year.....	55,276	276	4,131	13	74.7	* 47.1
1-4.....	202,714	5,713	1,786	33	8.8	* 5.8
Under 5 years.....	257,990	5,989	5,977	46	22.9	* 7.7
5-14.....	432,777	45,879	1,153	84	2.7	* 1.8
15-29.....	461,299	155,324	1,965	506	4.2	3.3
30-44.....	275,061	173,075	1,344	786	4.9	4.5
45-64.....	185,879	146,118	1,725	1,884	9.3	9.5
65 and over.....	56,858	43,935	2,500	1,688	44.0	38.4
Unknown age.....	922	535	122	48	132.3	89.7

* Deaths of the foreign-born returned at these ages are too few to give reliable death-rates.

AVERAGE AGES AT DEATH BY NATIVITY.

The criticisms that were made of the data in the preceding table apply also to the average ages at death by nativity, as presented in Table 71, and especially to the first portion thereof, which includes still-births among the decedents. All still-births and nearly all deaths of infants are included among the native-born decedents, which evidently causes the average age at death of this class to be too low as compared with that of the foreign-born. The case is still further complicated by the fact that for some years proper care was not exercised in the computation of the average age, so that for those years and also for the ten-year period which includes them, the results are questionable.

Despite the very obvious imperfections of this table just described, it is believed that certain indications of interest and value may be derived from it. The average age at death of males was greater than that of females by two years in 1894 (still-births excluded), and was over a year greater for the ten-year period, 1885-94 (still-births included). The average age of foreign-born decedents in 1894 was over double that of native-born decedents; this fact, it is scarcely necessary to repeat, is in no wise a measure of the healthfulness of the two classes, since the average age of the foreign-born population is much higher than that of the native-born population. In the following section of this Report a statement of average ages at death during the year 1894 will be given for certain important occupations.

Table 71.—*The average ages, by nativity, of decedents in Michigan for each of the years 1885-94, inclusive, with the mean of the ten-year period. (Still-births included.) Also the average ages for three years, 1892-94, with exclusion of still-births.*

Years.	All nativities.			Native-born.			Foreign-born.		
	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.
(Still-births included.)									
1885.....	28.5	29.0	28.1	22.0	22.0	22.1	49.9	51.4	48.4
1886.....	27.8	28.8	26.9	21.8	22.2	21.4	49.3	50.3	48.5
1887.....	29.1	29.1	28.0	21.9	21.8	22.3	49.7	50.2	49.1
1888.....	28.5	28.8	28.1	21.8	21.7	22.1	50.5	50.8	50.1
1889*.....	28.6	30.4	29.4	25.2	23.3	22.1	50.9	49.9	55.0
1890*.....	28.6	30.5	29.4	24.8	23.4	23.2	49.9	50.0	48.4
1891.....	30.3	31.6	30.1	24.0	23.9	24.1	53.5	54.8	51.3
1892.....	32.2	32.4	32.0	24.9	24.5	25.5	52.6	53.0	52.1
1893.....	31.8	32.4	31.1	24.6	24.5	24.7	53.1	53.8	52.3
1894.....	32.6	33.4	31.8	25.5	25.6	25.5	55.2	55.9	54.4
Av. 1885-94*..	29.8	30.6	29.4	23.7	23.3	23.3	51.5	52.0	51.0
(Still-births excluded.)									
1892.....	33.7	34.1	33.3	26.5	26.3	26.8	52.6	53.0	52.1
1893.....	33.3	34.1	32.4	26.2	26.3	26.1	53.1	53.8	52.3
1894.....	34.2	35.2	33.2	27.2	27.4	26.9	55.2	55.9	54.4

* The average age of the total of any nativity must obviously lie between the average ages of the males and females constituting it. In certain years, notably 1889 and 1890, this does not hold in the average ages as stated, and suggests errors in calculation in the Reports for those years. Unfortunately the mistakes cannot now be corrected, so that the data for these years, as well as for the ten-year period, which is markedly affected thereby, must be rejected for exact comparisons.

GENERAL NATIVITY AND NATIONALITY OF DECEDENTS IN MICHIGAN.

In Table 72 may be found the number and percentages of decedents of each general nativity, as returned in Michigan for each of the years 1885-94, inclusive. In round numbers about three-fourths of all deaths are those of persons born in the United States; a little over one-fifth represents the deaths of the foreign-born, and the remainder, averaging about 4 per cent, is made up of deaths of persons of unknown or unstated nativity.

Table 72.—Nativity of decedents in Michigan for the years 1885-94, inclusive, with the average of the ten years. (Still-births included.)

Years.	All nativities.	Native-born.		Foreign-born.		Unknown nativity.	
	Number.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1885.....	16,646	12,694	76.3	3,482	20.9	470	2.8
1886.....	18,187	14,079	77.4	3,537	19.4	571	3.1
1887.....	19,482	14,556	74.7	4,187	21.5	739	3.8
1888.....	21,764	16,328	75.0	4,501	20.7	935	4.3
1889.....	20,315	15,171	74.7	4,405	21.7	739	3.6
1890.....	21,642	15,890	73.4	4,908	22.7	844	3.9
1891.....	22,079	16,287	73.7	4,811	21.8	981	4.5
1892.....	21,729	15,683	72.2	4,915	22.6	1,131	5.2
1893.....	21,982	16,187	73.6	5,061	23.0	734	3.3
1894.....	20,959	15,718	75.0	4,542	21.7	699	3.3
Average 1885-94.....	20,479	15,259	74.5	4,436	21.7	784	3.8

For the first time the nationality of decedents in Michigan has been compiled and in Table 73 may be found death-rates with reference to population of same nationality according to the State census of 1894. These rates throw much light on the statements made in preceding tables in regard to general nativity. For example it was noted in Table 70 that the death-rate of the native-born exceeded that of the foreign-born as a whole. Table 73 shows that the death-rate of natives of the United States, 8.8 per 1,000 population, occupies an intermediate position; it is exceeded by the death-rates of natives of the following countries: England and Wales, Scotland, Ireland, Germany and France. Among the prominent countries having death-rates decidedly lower than those of the native-born, are Canada, Austria, Norway, Sweden, Denmark, Russia, Poland and Italy. Here we have the clue to the true vital situation. We note that the lower death-rates belong to the countries whose immigrants have most recently arrived. The old wave of Irish immigration in the '50s and '60s is now represented by an Irish-born population of greater average age than the German immigrants of the '70s and '80s, and these again exceed the average age of the young Swedes, Poles and Italians, who came to this State very recently. The only satisfactory method of comparison is by computing rates based upon inhabitants of the same period of age, data for which are not at present obtainable.

Table 73.—*Number of decedents of each nationality in Michigan during the year 1894, with rates per 1,000 population of like nationality.*

Country of birth.	Population, 1894.	Deaths, 1894.	Death- rate per 1,000 in- habitants of same national- ity.
United States.....	1,670,786	* 14,716	* 8.8
Canada.....	200,447	1,181	5.9
England and Wales.....	49,314	527	10.7
Scotland.....	11,849	150	12.7
Ireland.....	35,221	623	17.7
Germany.....	143,057	1,295	9.1
Austria.....	4,651	19	4.1
Holland.....	32,868	231	7.0
Belgium.....	2,882	19	6.6
Switzerland.....	3,045	19	6.2
Norway.....	8,173	42	5.1
Sweden.....	28,197	164	5.8
Denmark.....	7,339	36	4.9
Russia.....	16,152	55	3.4
Hungary.....	439		
Bohemia.....	2,757	13	4.7
Poland.....	15,366	65	4.2
France.....	2,849	40	14.0
Italy.....	3,397	16	* 4.7
All others.....	2,852	47	16.5

* Exclusive of still-births.

DEATHS BY PERIODS OF AGE AND MONTHS OF DEATH.

Table 74 exhibits the deaths of 1894, arranged according to the months of death and certain periods of age of the decedents. Still-births are included and also deaths at unspecified ages. The periods of age above five years agree with the form of this table in previous reports, thus enabling comparisons to be conveniently made with other years. So far as the relative numbers of deaths in the several months is concerned, this table would be far more valuable were it not certain that the deaths returned for any month are largely affected by the nearness or remoteness of that month from the date of enumeration in May, 1895.

Including still-births, nearly one-quarter of the total number of deaths recorded are those of infants under one year of age, and over one-third are those of children under five years. About one-third of the total deaths are those of persons aged from five to fifty years, and the remaining third is constituted of persons aged fifty years and over. The percentage of deaths over fifty years of age (33.1 per cent), is slightly higher than that for 1893 (32.5 per cent).

Table 74.—The relation of the deaths at different periods of age to deaths at all ages, by months; and for the same period of age the relation of the deaths in each month to the deaths in the year 1894. (Still-births included.)

Deaths by ages in periods of years.	Year, 1894.	Months, 1894.											
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
All ages.....	* 20,934	1,404	1,272	1,641	1,727	1,705	1,619	1,608	2,024	2,047	2,007	1,845	1,975
Under 1 †.....	5,181	304	284	378	380	372	345	454	653	628	517	430	456
{ Number.....													
{ Per cent of all ages.....	24.7	21.7	20.8	23.0	22.0	21.8	21.3	27.2	32.3	30.7	25.8	23.3	23.1
{ Per cent of all months.....	100.0	5.9	5.1	7.3	7.3	7.2	6.7	8.8	12.6	12.1	10.0	8.3	8.8
Under 5 †.....	7,018	385	369	517	518	506	460	610	887	862	688	591	603
{ Number.....													
{ Per cent of all ages.....	33.5	28.1	28.9	31.5	30.0	29.8	28.4	36.6	43.8	42.1	34.8	32.0	30.5
{ Per cent of all months.....	100.0	5.6	5.3	7.4	7.4	7.2	6.6	8.7	12.6	12.3	9.9	8.4	8.6
5 to 10.....	759	52	46	50	67	61	59	38	57	69	75	59	96
{ Number.....													
{ Per cent of all ages.....	3.6	3.7	3.6	3.0	3.9	3.6	3.6	2.3	2.8	3.4	3.7	4.8	4.9
{ Per cent of all months.....	100.0	6.9	6.1	6.6	8.8	8.0	7.8	5.0	7.5	9.1	9.9	11.7	12.6
10 to 20.....	1,238	82	64	94	104	99	100	106	120	100	128	120	141
{ Number.....													
{ Per cent of all ages.....	6.0	5.8	5.0	5.7	6.0	5.8	6.2	6.4	5.9	4.9	6.4	6.5	7.1
{ Per cent of all months.....	100.0	6.5	5.1	7.5	8.3	7.9	7.9	8.4	9.5	7.9	10.2	9.5	11.2
20 to 50.....	4,683	307	319	406	388	411	413	384	380	412	459	425	389
{ Number.....													
{ Per cent of all ages.....	22.4	21.9	25.0	24.9	22.5	24.1	25.5	23.0	18.8	20.1	22.9	23.0	19.7
{ Per cent of all months.....	100.0	6.5	6.8	8.7	8.3	8.8	8.8	8.2	8.1	8.8	9.8	9.1	8.3
50 and over.....	6,934	550	450	537	625	594	563	510	557	585	621	602	720
{ Number.....													
{ Per cent of all ages.....	33.1	39.2	35.4	33.9	36.2	34.8	34.8	30.6	27.5	28.6	30.9	32.6	36.5
{ Per cent of all months.....	100.0	7.9	6.5	8.0	9.0	8.6	8.1	7.4	8.0	8.4	9.0	8.7	10.4
Unknown age.....	270	18	24	15	25	32	24	20	23	19	26	18	26
{ Number.....													
{ Per cent of all ages.....	1.3	1.3	1.9	.9	1.4	1.9	1.5	1.2	1.1	.9	1.3	1.0	1.3
{ Per cent of all months.....	100.0	6.7	8.9	5.6	9.3	11.8	8.9	7.4	8.5	7.0	9.6	6.7	9.6

† Including still-births.

* Excluding 25 deaths in unknown month.

Table 75.—*Exhibiting for the State and counties, by sex, the number of deaths returned in each month of the year 1894. (Still-births included.)*

State and counties.	Sex.	Year, 1894.	Months, 1894.												
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
State.....	Total.....	20,959	1,404	1,272	1,641	1,727	1,705	1,619	1,668	2,024	2,047	2,007	1,845	1,975	23
	Males.....	11,159	730	678	859	936	905	867	921	1,088	1,085	1,043	967	1,056	14
	Females.....	9,744	667	589	779	788	798	748	742	921	967	964	875	918	10
	Unknown.....	56	7	5	3	3	4	4	5	5	5	5	3	6	1
Alcona.....	Total.....	32	1	1	---	2	4	1	4	6	1	6	3	3	---
	Males.....	19	1	---	---	2	2	1	3	2	---	4	1	3	---
	Females.....	13	---	1	---	---	2	---	1	4	1	2	2	---	---
Alger.....	Total.....	13	---	---	---	2	1	---	1	2	2	1	4	---	---
	Males.....	7	---	---	---	2	---	---	---	2	---	---	1	---	---
	Females.....	6	---	---	---	---	1	---	1	---	---	1	3	---	---
Allegan.....	Total.....	367	30	19	21	33	38	34	32	31	36	26	45	23	---
	Males.....	200	14	14	13	14	19	21	24	12	20	15	23	11	---
	Females.....	167	16	5	8	19	19	13	8	19	16	11	22	11	---
Alpena.....	Total.....	141	10	6	13	7	7	11	7	29	11	10	10	20	---
	Males.....	86	3	2	6	4	6	7	5	19	8	6	8	12	---
	Females.....	55	7	4	7	3	1	4	2	10	3	4	2	8	---
Antrim.....	Total.....	86	6	5	5	6	13	5	5	6	13	8	6	8	---
	Males.....	42	5	2	2	4	5	2	3	2	5	4	4	4	---
	Females.....	44	1	3	3	2	8	3	2	4	8	4	2	4	---
Arenac.....	Total.....	51	2	---	4	4	3	7	1	6	8	7	5	4	---
	Males.....	22	1	---	---	3	2	2	1	3	2	4	2	2	---
	Females.....	28	1	---	4	1	1	5	---	3	6	3	3	2	---
	Unknown.....	1	---	---	---	---	---	---	---	---	---	---	1	---	---
Baraga.....	Total.....	35	2	2	3	1	2	4	4	4	2	2	6	3	---
	Males.....	17	---	---	2	1	---	1	2	1	1	2	5	2	---
	Females.....	18	2	2	1	---	2	3	2	3	1	---	1	1	---
Barry.....	Total.....	177	16	13	14	21	14	15	9	17	13	11	14	20	---
	Males.....	86	7	10	7	5	6	11	7	7	4	6	5	11	---
	Females.....	91	9	3	7	16	8	4	2	10	9	5	9	9	---
Bay.....	Total.....	506	42	29	33	39	49	28	42	64	50	43	43	44	---
	Males.....	270	23	15	21	21	30	17	21	29	24	20	24	25	---
	Females.....	234	18	14	12	18	19	11	20	35	26	23	19	19	---
	Unknown.....	2	1	---	---	---	---	---	1	---	---	---	---	---	---
Benzie.....	Total.....	67	4	3	4	4	5	8	5	5	8	8	5	5	3
	Males.....	41	3	2	3	3	2	5	4	4	3	3	5	3	1
	Females.....	26	1	1	1	1	3	3	1	1	5	5	---	2	2
Berrien.....	Total.....	396	19	19	34	37	23	30	39	36	53	44	34	28	---
	Males.....	206	10	11	13	23	10	16	22	9	35	26	15	16	---
	Females.....	190	9	8	21	14	13	14	17	27	18	18	19	12	---
Branch.....	Total.....	302	17	20	31	26	16	23	19	16	34	37	33	27	3
	Males.....	143	14	11	14	9	7	10	9	9	17	15	16	10	2
	Females.....	159	3	9	17	17	9	13	10	7	17	22	17	17	1
Calhoun.....	Total.....	398	27	27	39	28	25	34	27	45	38	37	37	34	---
	Males.....	203	15	15	19	14	13	20	16	23	20	16	19	18	---
	Females.....	189	12	11	19	14	11	13	11	22	17	20	18	21	---
	Unknown.....	6	---	1	---	---	1	1	---	---	1	1	---	---	---
Cass.....	Total.....	175	10	6	16	15	15	12	17	13	13	19	20	19	---
	Males.....	94	5	4	8	8	9	8	12	7	5	10	10	8	---
	Females.....	81	5	2	8	7	6	4	5	6	8	9	10	11	---
Charlevoix.....	Total.....	83	8	6	7	5	7	9	2	8	9	7	6	9	---
	Males.....	42	3	4	3	2	2	3	2	4	5	3	4	7	---
	Females.....	41	5	2	4	3	5	6	---	4	4	4	2	2	---

DEATHS BY COUNTIES, SEX AND MONTHS.

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Table 75.—CONTINUED.—Deaths returned by counties, sex and months, 1894.

Counties.	Sex.	Year, 1894.	Months, 1894.												
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
Cheboygan	Total	137	11	4	10	21	11	8	12	12	16	12	9	11	---
	Males	70	6	3	6	11	4	5	6	8	6	7	5	8	---
	Females	67	5	1	4	10	7	3	6	4	10	5	4	3	---
Chippewa	Total	96	6	3	9	5	8	8	12	4	10	11	10	10	---
	Males	54	3	2	8	2	4	5	10	3	5	5	2	5	---
	Females	38	3	1	1	3	4	3	2	1	5	6	7	4	---
	Unknown	4	---	---	---	---	---	1	1	---	---	---	1	1	---
Clare	Total	36	2	2	2	7	2	3	3	4	3	---	4	4	---
	Males	15	1	1	1	4	1	1	1	2	1	---	2	1	---
	Females	21	1	1	1	3	1	2	2	2	2	---	2	3	---
Clinton	Total	193	14	11	17	18	21	10	12	16	21	17	18	18	---
	Males	97	7	8	9	7	11	5	4	6	13	8	9	10	---
	Females	96	7	3	8	11	10	5	8	10	8	9	9	8	---
Crawford	Total	34	4	3	3	3	1	5	5	4	3	2	---	1	---
	Males	21	3	2	2	3	---	2	4	2	2	---	---	1	---
	Females	13	1	1	1	---	1	3	1	2	1	2	---	---	---
Delta	Total	128	6	6	8	12	11	5	11	13	13	15	16	12	---
	Males	74	3	2	5	9	5	5	6	7	7	9	7	7	---
	Females	54	3	4	3	3	6	---	5	6	6	6	7	5	---
Dickinson	Total	170	8	20	17	13	16	14	19	18	12	11	13	9	---
	Males	105	5	15	7	8	11	9	11	9	7	7	10	6	---
	Females	65	3	5	10	5	5	5	8	9	5	4	3	3	---
Eaton	Total	303	29	18	36	26	26	25	12	20	32	27	20	29	3
	Males	154	12	7	20	18	12	13	6	13	14	14	10	14	1
	Females	149	17	11	16	8	14	12	6	7	18	13	10	15	2
Emmet	Total	81	10	1	8	4	8	5	9	5	6	7	10	8	---
	Males	36	5	---	2	3	3	2	6	3	3	3	3	3	---
	Females	45	5	1	6	1	5	3	3	2	3	4	7	5	---
Genesee	Total	366	30	18	26	33	35	34	21	30	42	31	34	32	---
	Males	194	18	13	11	16	15	18	7	23	19	16	21	17	---
	Females	172	12	5	15	17	20	16	14	7	23	15	13	15	---
Gladwin	Total	13	---	1	---	2	---	1	1	---	5	1	1	1	---
	Males	9	---	---	---	2	---	---	---	---	3	1	1	---	---
	Females	4	---	---	---	---	---	1	---	---	2	---	---	1	---
Gogebic	Total	155	15	20	16	10	9	7	20	15	11	18	9	5	---
	Males	73	9	8	9	6	6	2	7	6	4	7	5	4	---
	Females	82	6	12	7	4	3	5	13	9	7	11	4	1	---
Gr'd Traverse.	Total	237	22	18	11	16	15	17	13	17	36	27	25	20	---
	Males	151	13	13	7	7	9	11	7	11	22	21	16	14	---
	Females	86	9	5	4	9	6	6	6	6	14	6	9	6	---
Gratiot	Total	179	11	12	13	15	13	20	12	15	17	16	17	13	---
	Males	78	3	3	6	7	6	7	4	6	9	8	11	8	---
	Females	101	8	9	7	8	7	13	8	9	8	8	6	10	---
Hillsdale	Total	242	23	17	12	25	13	21	18	12	23	24	33	21	---
	Males	120	10	11	3	11	6	12	10	8	12	10	16	11	---
	Females	120	13	5	9	14	7	9	8	4	11	13	17	10	---
	Unknown	2	---	1	---	---	---	---	---	---	---	---	---	---	---
Houghton	Total	527	42	31	34	32	35	33	55	84	58	41	41	41	---
	Males	283	21	17	19	21	19	20	29	48	31	20	15	23	---
	Females	235	19	13	15	10	16	12	25	34	27	21	26	17	---
	Unknown	9	2	1	---	1	---	1	1	2	---	---	---	1	---
Huron	Total	252	12	17	16	28	18	15	18	17	30	35	23	23	---
	Males	138	4	7	9	14	14	8	4	7	17	23	17	14	---
	Females	114	8	10	7	14	4	7	9	10	13	12	6	14	---

Table 75.—CONTINUED.—Deaths returned by counties, sex and months, 1894.

Counties.	Sex.	Year, 1894.	Months, 1894.												Unknown.
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Ingham	Total	471	37	80	38	40	38	34	23	46	53	63	37	34	---
	Males	222	19	14	18	20	16	24	11	21	25	21	16	17	---
	Females	248	17	16	18	20	22	10	12	25	28	42	21	17	---
	Unknown	1	1	---	---	---	---	---	---	---	---	---	---	---	---
Ionia	Total	274	25	18	19	24	21	20	21	27	34	20	21	24	---
	Males	134	12	5	13	12	7	12	10	17	12	13	12	9	---
	Females	139	13	13	6	11	14	8	11	10	22	7	9	15	---
	Unknown	1	---	---	---	1	---	---	---	---	---	---	---	---	---
Iosco	Total	99	5	5	7	6	9	9	13	8	8	6	11	12	---
	Males	55	2	2	2	5	6	6	6	3	6	5	6	6	---
	Females	43	3	3	5	1	3	3	7	4	2	1	5	6	---
	Unknown	1	---	---	---	---	---	---	---	1	---	---	---	---	---
Iron	Total	37	4	2	3	---	3	4	3	5	3	6	1	3	---
	Males	19	3	---	---	---	2	2	2	2	2	3	---	1	---
	Females	18	1	2	1	---	1	2	1	3	1	3	1	2	---
Isabella	Total	166	8	10	9	12	11	14	22	17	9	20	21	13	---
	Males	98	4	6	4	5	6	9	13	12	3	12	16	8	---
	Females	68	4	4	5	7	5	5	9	5	6	8	5	5	---
Jackson	Total	467	28	35	41	45	41	25	41	40	45	47	30	49	---
	Males	250	15	20	24	24	25	17	21	23	17	20	16	28	---
	Females	217	13	15	17	21	16	8	20	17	28	27	14	21	---
Kalamazoo	Total	445	39	21	27	22	41	39	36	33	43	44	48	47	---
	Males	237	20	9	14	9	26	22	22	21	23	23	25	23	---
	Females	207	19	12	13	13	15	17	14	11	25	21	23	24	---
	Unknown	1	---	---	---	---	---	---	---	1	---	---	---	---	---
Kalkaska	Total	39	5	---	4	5	1	2	4	4	5	1	3	5	---
	Males	21	2	---	1	4	1	---	3	2	3	---	2	3	---
	Females	18	3	---	3	1	---	2	1	2	2	1	1	2	---
Kent	Total	1,183	70	61	80	82	117	83	97	117	118	122	123	111	2
	Males	617	32	27	43	51	66	39	55	60	65	68	54	56	1
	Females	564	38	34	37	31	50	44	42	57	53	54	69	54	1
	Unknown	2	---	---	---	---	1	---	---	---	---	---	---	---	---
Keweenaw	Total	19	3	---	2	3	2	1	1	1	2	3	1	---	---
	Males	11	3	---	1	1	2	---	1	1	---	---	---	---	---
	Females	8	---	---	1	2	---	1	---	---	1	3	---	---	---
Lake	Total	57	7	3	5	5	7	5	1	7	6	3	1	7	---
	Males	30	5	1	1	3	3	4	1	2	4	2	1	3	---
	Females	27	2	2	4	2	4	1	---	5	2	1	---	4	---
Lapeer	Total	202	11	9	16	18	20	13	17	17	21	13	22	23	2
	Males	109	7	5	6	9	13	5	11	8	13	6	13	11	2
	Females	93	4	4	10	9	7	8	6	9	8	7	9	12	---
Leelanau	Total	94	4	3	2	9	5	4	6	16	8	15	11	11	---
	Males	54	4	1	1	6	4	3	4	5	4	8	6	8	---
	Females	40	---	2	1	3	1	1	2	11	4	7	5	3	---
Lenawee	Total	428	24	37	36	38	39	30	30	35	36	49	39	35	---
	Males	213	8	15	15	22	20	13	19	16	17	22	26	20	---
	Females	215	16	22	21	16	19	17	11	19	19	27	13	15	---
Livingston	Total	175	15	8	13	12	21	15	14	11	11	24	16	15	---
	Males	99	10	5	8	8	9	11	8	5	6	13	9	7	---
	Females	76	5	3	5	4	12	4	6	6	5	11	7	8	---
Luce	Total	17	2	2	1	---	2	2	2	1	1	3	---	1	---
	Males	12	1	1	1	---	1	2	2	---	---	2	---	1	---
	Females	4	1	1	---	---	---	---	---	---	1	---	---	---	---
	Unknown	1	---	---	---	---	---	---	---	---	---	1	---	---	---

Table 75.—CONTINUED.—Deaths returned by counties, sex and months, 1894.

Counties.	Sex.	Year, 1894.	Months, 1894.												
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
Mackinac	Total	58	6	2	3	6	4	4	6	8	9	4	2	4	...
	Males	27	3	1	1	1	3	2	2	4	5	2	1	2	...
	Females	31	3	1	2	5	1	2	4	4	4	2	1	2	...
Macomb	Total	291	21	19	24	22	27	17	21	33	18	32	22	35	...
	Males	165	17	7	15	14	17	7	10	22	12	16	12	16	...
	Females	126	4	12	9	8	10	10	11	11	6	16	10	19	...
Manistee	Total	246	10	17	19	15	16	20	17	30	30	40	15	16	1
	Males	144	7	8	9	9	10	13	14	20	18	20	9	7	...
	Females	102	3	9	10	6	6	7	3	10	12	20	6	9	1
Manitou	Total	18	1	2	1	2	3	2	2	2	2	3	1	1	...
	Males	14	1	1	2	1	2	3	2	2	1	1	1	1	...
	Females	4	...	...	...	...	...	...	...	...	1	2	2	1	...
Marquette	Total	356	23	22	37	37	24	33	21	47	33	24	21	34	...
	Males	211	11	16	21	23	16	23	11	28	18	12	11	21	...
	Females	145	12	6	16	14	8	10	10	19	15	12	10	13	...
Mason	Total	180	3	11	13	19	18	15	10	20	13	17	20	21	...
	Males	90	1	4	7	9	7	7	6	12	8	6	11	12	...
	Females	90	2	7	6	10	11	8	4	8	5	11	9	9	...
Mecosta	Total	187	12	6	20	12	16	18	14	11	22	14	22	20	...
	Males	106	7	4	13	5	7	12	5	6	13	9	11	14	...
	Females	79	5	2	7	7	8	6	9	5	8	5	11	6	...
	Unknown	2	...	...	...	1	...	...	...	...	1	...	...	...	...
Menominee	Total	290	15	32	24	26	25	29	25	40	22	13	19	20	...
	Males	165	7	18	14	20	15	18	16	22	7	10	6	12	...
	Females	122	8	14	10	6	10	11	9	18	13	3	12	8	...
	Unknown	3	...	...	...	...	...	...	...	...	2	...	1	...	...
Midland	Total	118	5	6	6	5	5	12	13	21	8	15	12	...	...
	Males	63	3	3	2	5	3	7	9	11	5	9	6	...	...
	Females	50	2	3	4	...	2	5	4	10	3	6	6	...	...
Missaukee	Total	51	1	5	5	3	2	1	9	2	8	2	3	10	...
	Males	26	...	2	4	1	1	...	5	2	4	1	2	4	...
	Females	22	1	3	1	2	1	1	3	...	4	1	1	4	...
Monroe	Total	355	15	17	18	25	24	34	35	37	26	43	36	45	...
	Males	168	4	8	9	14	11	14	16	21	15	20	18	18	...
	Females	187	11	9	9	11	13	20	19	16	11	23	18	27	...
Montcalm	Total	250	16	16	23	22	19	22	17	24	25	22	15	29	...
	Males	122	10	9	11	10	9	12	9	13	10	9	8	12	...
	Females	127	6	7	12	12	10	10	8	11	15	12	7	17	...
	Unknown	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Montmorency	Total	13	2	1	...	1	...	1	1	...	...	3	...	5	...
	Males	6	2	...	...	...	1	...	...	...	...	...	...	2	...
	Females	7	...	1	...	...	...	...	...	...	...	3	...	3	...
Muskegon	Total	344	29	12	29	40	31	20	29	31	38	28	23	33	1
	Males	195	14	4	16	25	18	9	20	19	14	18	15	22	1
	Females	148	14	8	13	15	13	11	9	12	24	10	8	11	...
	Unknown	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Newaygo	Total	103	6	6	6	13	8	6	7	13	4	6	11	17	...
	Males	55	4	5	3	5	2	3	5	8	4	3	4	9	...
	Females	48	2	1	3	8	6	3	2	5	...	3	7	8	...
Oakland	Total	422	29	20	40	36	45	47	27	30	38	39	33	38	...
	Males	224	12	10	22	21	28	21	16	16	18	21	19	20	...
	Females	198	17	10	18	15	17	26	11	14	20	18	14	18	...

Table 75.—CONTINUED.—Deaths returned by counties, sex and months, 1894.

Counties.	Sex.	Year, 1894.	Months, 1894.												Unknown.
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Oceana.....	Total.....	129	7	10	7	12	9	11	4	9	25	12	9	14	---
	Males.....	81	3	6	3	9	7	7	4	6	12	9	7	8	---
	Females.....	48	4	4	4	3	2	4	---	3	13	3	2	6	---
Ogemaw.....	Total.....	13	---	1	---	2	1	2	2	---	---	2	1	---	---
	Males.....	7	---	---	---	2	1	1	---	---	---	1	---	---	---
	Females.....	6	---	1	---	---	---	1	2	---	---	1	1	---	---
Ontonagon.....	Total.....	48	4	2	6	3	3	4	8	6	4	4	1	3	---
	Males.....	31	2	2	4	2	---	2	7	4	3	3	---	2	---
	Females.....	16	2	---	2	1	3	1	1	2	1	1	1	1	---
	Unknown.....	1	---	---	---	---	---	1	---	---	---	---	---	---	---
Osceola.....	Total.....	153	6	13	16	5	19	19	6	15	21	13	10	10	---
	Males.....	77	4	6	9	2	5	8	5	9	10	6	6	7	---
	Females.....	76	2	7	7	3	14	11	1	6	11	7	4	3	---
Oscoda.....	Total.....	3	---	---	1	---	---	2	---	---	---	---	---	---	---
	Males.....	1	---	---	1	---	---	---	---	---	---	---	---	---	---
	Females.....	2	---	---	---	---	---	2	---	---	---	---	---	---	---
Otsego.....	Total.....	35	1	3	3	6	1	1	2	3	2	5	4	4	---
	Males.....	17	---	---	2	3	---	1	1	3	2	2	1	2	---
	Females.....	18	1	3	1	3	1	---	1	---	---	3	3	2	---
Ottawa.....	Total.....	358	21	18	32	36	24	23	33	34	33	31	31	40	2
	Males.....	178	6	6	16	15	7	6	16	28	20	19	13	27	1
	Females.....	180	15	12	16	21	17	17	17	8	13	12	18	13	1
Presque Isle.....	Total.....	47	5	---	8	2	2	2	7	2	5	1	6	7	---
	Males.....	30	5	---	6	2	---	---	5	1	4	1	3	3	---
	Females.....	17	---	---	2	---	2	2	2	1	1	---	3	4	---
Roscommon.....	Total.....	2	---	---	---	---	---	---	1	---	---	1	---	---	---
	Males.....	2	---	---	---	---	---	---	1	---	---	1	---	---	---
	Females.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Saginaw.....	Total.....	919	70	50	71	99	81	69	58	79	83	95	80	84	---
	Males.....	475	34	25	36	47	46	26	37	40	47	49	42	45	---
	Females.....	440	34	24	35	51	35	43	21	39	36	45	38	39	---
	Unknown.....	4	2	---	---	1	---	---	---	---	---	1	---	---	---
Sanilac.....	Total.....	274	14	24	31	14	25	18	24	27	41	21	20	15	---
	Males.....	157	10	18	19	7	15	11	13	15	23	12	7	7	---
	Females.....	117	4	6	12	7	10	7	11	12	18	9	13	8	---
Schoolcraft.....	Total.....	91	1	4	7	3	6	6	2	15	17	8	5	15	2
	Males.....	63	1	2	5	2	6	5	2	10	12	6	3	8	1
	Females.....	27	---	2	2	1	---	1	---	5	5	2	2	7	---
	Unknown.....	1	---	---	---	---	---	---	---	---	---	---	---	---	1
Shiawassee.....	Total.....	250	13	8	14	16	29	14	15	29	32	31	26	21	2
	Males.....	121	5	7	7	8	10	8	7	11	19	15	12	11	1
	Females.....	129	8	1	7	8	19	6	8	18	13	16	14	10	1
St. Clair.....	Total.....	493	32	35	28	38	47	36	33	52	48	59	47	38	---
	Males.....	276	16	18	16	21	30	18	16	36	19	30	29	27	---
	Females.....	217	16	17	12	17	17	18	17	16	29	29	18	11	---
St. Joseph.....	Total.....	244	21	17	18	31	12	22	19	22	23	19	14	26	---
	Males.....	120	13	8	8	13	5	9	7	13	10	15	5	14	---
	Females.....	124	8	9	10	18	7	13	12	9	13	4	9	12	---
Tuscola.....	Total.....	192	11	12	13	15	14	13	18	13	21	21	17	24	---
	Males.....	105	6	6	7	9	7	8	13	5	15	10	9	10	---
	Females.....	87	5	6	6	6	7	5	5	8	6	11	8	14	---
Van Buren.....	Total.....	328	20	22	23	25	24	27	20	36	32	26	26	45	---
	Males.....	177	8	16	14	15	17	14	14	14	20	13	12	20	---
	Females.....	149	12	6	9	10	7	13	6	22	12	13	14	25	---

Table 75.—CONCLUDED.—Deaths returned by counties, sex and months, 1894.

Counties.	Sex.	Year. 1894.	Months, 1894.												
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
Washtenaw	Total	394	26	21	55	34	27	30	33	33	30	28	35	36	1
	Males	206	15	10	31	15	16	17	18	19	12	11	22	19	1
	Females	185	11	11	23	19	11	13	20	13	18	17	13	16	---
	Unknown	3	---	---	1	---	---	---	---	1	---	---	---	1	---
Wayne	Total	3,443	224	228	266	273	261	282	328	338	299	328	305	338	3
	Males	1,859	123	127	133	151	132	158	166	183	163	174	154	193	2
	Females	1,578	101	99	132	122	128	124	161	155	106	154	151	145	1
	Unknown	6	---	2	1	---	1	---	1	---	1	---	---	---	---
Wexford	Total	117	8	9	10	10	11	12	4	11	15	7	9	11	---
	Males	64	2	6	4	7	5	6	2	5	9	3	8	7	---
	Females	53	6	3	6	3	6	6	2	6	6	4	1	4	---

DEATHS BY AGES, MONTHS AND SEX—DETAILED STATEMENT BY COUNTIES.

Table 75 presents the details of the returns of deaths for the months and counties by sex. This table was formerly united, with the following one, but separation was necessary since the latter, Table 76, has been enlarged to include several additional columns of importance, viz., the deaths by ages in individual years under 5. Still-births are also for the first time separately stated in this table, so that their disturbing influence upon the death-rates of children under 5 and of infants under 1 year may be eliminated. The study of infant mortality is chiefly occupied with the causes of deaths of children born alive; although of great interest and importance in itself, the study of causes of still-births may be properly separated from it in this connection. It should be remembered that the numbers returned for each period of age for different counties may be dependent, to a large extent, upon the special age-distribution of the population. Thus, counties of the upper peninsula have usually a larger proportion of children and young adults than the remainder of the State; counties of the southern part of the lower peninsula show a predominance of inhabitants of advanced years, and the deaths of children returned from these parts of the State vary in like manner.

Table 76.—Exhibiting for the State and counties, by sex, the number of deaths at each five-year period of age, and at each year of age under five years, during the year 1894. (Still-births included.)

State and counties.	Sex.	Total deaths at all ages, 1894.*	Still-born.	Ages in years.					Ages in periods of years.																Unk.	
				Under 1 year.†	1 to 5.				Under 5 to 10 years.†	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.		80 and over.
					1 to 2.	2 to 3.	3 to 4.	4 to 5.																		
State.	{ Total. Males. Females. Unknown.	20,959 11,159 9,144 56	1,002 549 402 51	4,181 2,298 1,881 2	924 497 427 1	418 215 202 1	259 123 136 1	236 177 109	6,018 3,260 2,755 3	760 399 361	490 241 249	768 333 425 513	913 425 518	513 381 452	776 378 398	796 394 402	656 309 347	718 379 339	776 449 327	787 451 336	998 545 412	1,005 573 432	1,141 646 495	957 583 404	1,245 681 567	277 151 116 2
Alcona.	{ Total. Males. Females.	32 19 13	4 4	3 3 1	3 2 1	3 2 1	3 2 1	9 6 3	3 1 2	2 1 1	2 1 1	1 1 1	1 1 1	1 1 1	2 1 1	2 1 1	2 1 1	2 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	2 1 1	2 1 1	
Alger.	{ Total. Males. Females.	13 7 6	2 2	3 1 2	3 1 1	3 1 1	3 1 1	7 3 4	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	
Allegan.	{ Total. Males. Females.	387 200 167	23 13 10	60 38 22	12 5 7	3 3 3	6 2 2	85 51 34	8 2 4	16 8 8	17 5 12	11 4 6	15 7 8	11 4 7	13 9 4	13 6 7	10 7 3	13 7 6	12 7 5	20 12 8	21 11 10	32 18 14	26 11 15	26 11 15	26 11 15	
Alpena.	{ Total. Males. Females.	141 86 55	9 6 3	43 27 16	6 5 1	5 2 3	2 1 1	57 35 22	8 5 3	8 2 3	6 3 3	6 3 3	5 3 2	5 3 2	3 1 2	7 4 3	2 2 2	2 2 2	5 6 2	7 4 3	6 2 2	2 2 2	1 2 1	4 2 2	2 2 2	1 1 1
Antrim.	{ Total. Males. Females.	86 42 44	3 2 1	18 9 9	4 2 2	2 1 1	2 1 1	26 12 14	6 3 3	1 1 1	3 2 2	3 1 2	3 1 2	3 1 2	2 1 1	4 3 3	4 3 3	4 3 3	5 4 2	4 3 2	3 2 1	6 3 3	6 3 3	1 1 1	6 3 3	3 3 3
Arenac.	{ Total. Males. Females. Unknown.	51 22 28 1	5 2 3	11 5 5 1	1 1 1 1	2 1 1 1	2 1 1 1	15 8 7	7 1 6	1 1 1	5 2 2	2 1 1	2 1 1	2 1 1	2 1 1	4 3 3	4 3 3	1 1 1	1 1 1	1 1 1	3 2 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
Baraga.	{ Total. Males. Females.	35 17 18	1 1 1	9 4 5	3 3 4	4 3 4	4 3 4	16 7 9	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1
Barry.	{ Total. Males. Females.	177 86 91	10 4 6	11 7 4	2 1 1	2 1 1	2 1 1	18 12 6	1 1 1	5 2 1	8 4 3	8 4 3	7 2 3	8 4 3	8 4 3	7 2 3	10 8 5	11 9 4	11 5 6	21 13 8	15 8 11	13 4 11	16 10 6	16 10 6	16 10 6	16 10 6

DEATHS BY COUNTIES, SEX AND AGES.

Bay	Total	506	270	234	2	26	149	19	7	6	10	191	30	13	21	26	13	18	17	14	9	13	20	17	18	13	10	7	1	
	Males	270	111	84		11	86	8	4	2	4	104	13	7	11	13	9	13	9	7	5	2	8	12	10	5	7	6	1	
	Females	234	159	150		15	63	11	3	4	6	87	18	6	10	13	13	13	13	6	11	5	6	14	12	8	6	1		
Benzie	Total	67	41	26		5	17	9	3	1	1	30	2	1	1	6	2	1	1	1	1	1	2	3	3	1	1	2	3	
	Males	41	26		2	8	9	6	2	1	1	18	2	1	1	5	2	1	1	1	1	1	2	2	3	1	1	1	2	
	Females	26				1	8	3	1			12											1	1	1				1	
Berrien	Total	386	206	190		12	52	8	8	1	1	70	14	7	16	19	12	14	12	7	15	15	16	27	22	34	38	31	20	
	Males	206	77	5		5	34	4	5	1	1	43	8	6	6	10	6	9	4	9	6	8	11	10	10	17	17	19	6	
	Females	190	129			7	18	4	3			27	6	1	10	6	9	4	4	9	6	8	11	12	15	16	12	14	14	
Branch	Total	302	143	159		9	24	8	2	3	4	41	17	5	11	14	12	11	12	8	13	15	11	17	26	25	21	33	1	
	Males	143	22	7		2	16	5	1	1	1	24	7	2	4	4	4	4	6	4	6	7	8	14	14	12	11	18	1	
	Females	159	121			7	8	3	1	2	3	17	10	3	7	10	8	7	6	4	7	9	9	12	13	10	15	1	1	
Calhoun	Total	388	203	189	6	16	52	6	2	2	4	66	6	9	9	14	10	12	19	11	16	14	19	28	23	46	50	2	2	
	Males	203	55	5		5	26	1	2	1	2	32	2	5	5	7	5	11	9	10	11	7	11	13	15	16	26	23	2	
	Females	189	148			6	26	5	1	2	1	34	4	4	7	5	11	9	9	10	11	7	8	10	13	7	20	27	2	
Cass	Total	175	94	81		8	19	6	3	2	1	31	7	3	8	6	10	4	2	2	11	13	6	4	15	15	14	16	16	
	Males	94	66		2	6	13	1	1	1	1	16	4	1	3	1	8	2	1	3	6	3	2	2	7	12	10	9	9	
	Females	81	28			2	13	1				15	3	2	5	5	2	2	7	6	5	2	4	1	4	4	3	4	7	
Charlevoix	Total	88	42	41		1	17	5	1	1	1	24	3	2	5	5	2	2	7	6	5	2	4	1	1	1	1	1	6	
	Males	42	11			1	11	2	1	1	1	10	3	1	2	2	5	4	2	5	4	4	1	3	1	1	1	1	1	
	Females	41	31			1	6	3	1			14			3	1	2	2	2	1	1	2	1	3	1	1	1	1	5	
Cheboygan	Total	137	70	67		7	38	4	1	2	3	47	13	12	5	8	6	5	6	4	4	4	4	4	4	3	1	1	4	
	Males	70	22			2	23	1	1	1	1	25	7	7	2	2	2	1	4	3	1	4	4	4	2	1	1	1	5	
	Females	67	48			5	15	3	2	1	1	22	6	5	3	6	4	4	2	1	1	1	1	3	1	1	1	1	4	
Chippewa	Total	96	54	33	4	6	32	6	1	1	1	41	4	6	3	8	5	1	4	2	1	1	1	1	4	2	2	1	4	
	Males	54	11			1	18	2	1	1	1	23	2	4	2	1	3	3	1	4	1	1	1	1	3	2	1	1	3	
	Females	33	43			4	14	4	1			18	2	2	2	3	3	3	1	1	1	1	1	1	1	1	1	1	1	
Clare	Total	36	15	21			10	1	1	1	1	11	1	2	1	1	1	4	3	2	2	2	2	2	2	2	2	1	1	1
	Males	15	7				3	1	1	1	1	7	1	2	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	
	Females	21	8				7					4		2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	
Clinton	Total	198	97	96		9	21	4	5	8	3	41	8	3	6	11	9	6	3	8	4	7	9	6	14	15	18	11	2	1
	Males	97	45			4	12	2	2	2	1	20	3	3	5	6	4	3	2	4	4	3	5	6	8	12	14	1	1	
	Females	96	52			5	9	2	6	2	2	21	6	1	5	6	4	3	2	4	3	2	4	3	7	6	7	4	1	
Crawford	Total	34	21	13		4	8	5	2	1	1	15	3	1	2	2	2	1	1	1	2	1	1	2	2	1	1	1	1	1
	Males	21	3			3	5	3	2	1	1	10	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Females	13	18			1	3	2	1	1	1	5		2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1

*** Still-births included.**

† Still-births not included.

Table 76.—CONTINUED.—Deaths by counties, by sex, by ages and five-year periods of age.

Counties.	Sex.	Total deaths at all ages, 1894.*	Still-born.	Ages in years.					Ages in periods of years.																	80 and over.	Unk.
				Under 1 year.†	1 to 2.	2 to 3.	3 to 4.	4 to 5.	Under 5 years.†	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.			
Delta.....	{ Total.....	128	6	36	6	4	1	1	48	5	2	10	3	8	10	5	8	3	5	7	2	1	1	1			
	{ Males.....	74	4	19	2	4	1	1	23	3	1	3	1	6	9	4	2	3	3	4	2	2	1	1			
Dickinson.....	{ Total.....	170	23	65	16	7	2	2	92	3	5	2	2	5	4	6	4	8	3	2	1	1	1	1	1		
	{ Males.....	105	14	43	9	3	1	1	57	1	2	2	1	2	2	5	1	5	5	2	1	1	1	1	1		
Eaton.....	{ Total.....	303	11	38	6	3	1	1	49	5	8	9	12	13	10	6	11	13	15	14	24	24	17	26	32	4	
	{ Males.....	154	4	27	3	2	1	1	31	2	4	3	7	3	3	1	4	8	10	4	10	18	3	17	19	3	
Emmet.....	{ Total.....	149	7	11	3	2	1	1	18	3	4	6	5	10	7	5	7	5	5	10	14	6	14	9	13	1	
	{ Males.....	81	3	23	5	1	1	2	32	3	3	7	1	2	3	2	5	2	2	3	5	5	2	4	4	1	
Genesee.....	{ Total.....	366	18	50	11	8	1	2	72	10	8	8	20	9	7	12	12	19	16	27	20	30	26	40			
	{ Males.....	194	9	26	6	4	1	1	38	5	3	4	13	3	2	3	4	8	10	9	11	9	20	18	25		
Gladwin.....	{ Total.....	13		5					5	1	2					1	1	1			2	1					
	{ Males.....	9		5					5	1	2					1	1	1			1	1					
Gogebic.....	{ Total.....	155	6	54	24	2	1	5	86	11	2	3	2	4	8	5	4	3	2	2	1	1	1	4		3	
	{ Males.....	73	1	24	12	2	1	4	37	6	2	1	2	3	3	3	4	2	1	1	1	1	1	3		2	
G.D. Traverse.....	{ Total.....	237	10	42	4	6		2	54	10	4	7	8	13	10	11	14	16	9	13	11	12	9	13	7	6	
	{ Males.....	151	8	26	3	6		2	37	6	4	2	5	9	8	5	12	12	4	8	8	7	4	10	2	4	
Gratiot.....	{ Total.....	86	2	16	1				17	4				4	2	6	2	4	5	5	3	5	3	5	5	2	
	{ Males.....	179	6	38	5	1			44	7	3	7	9	8	9	7	4	2	9	9	11	13	12	9	8	2	
Hillsdale.....	{ Total.....	73	2	15	2	1			18	6	3	3	4	7	3	3	3	3	3	8	7	8	4	4	3	1	
	{ Males.....	101	4	23	3				26	1				3	6	4	3	2	6	6	3	6	4	5	5	1	
Hillsdale.....	{ Total.....	242	3	19	2	4	1	1	27	4	3	5	9	6	5	10	9	9	12	18	21	14	22	23	34	5	
	{ Males.....	120	2	11	2	2	1	1	15	2	3	2	3	1	1	3	3	5	6	8	11	8	11	13	20	4	
Hillsdale.....	{ Total.....	120		8					11	2																	
	{ Unknown.....	2	1						1																		

DEATHS BY COUNTIES, SEX AND AGES.

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Houghton	Total	527	34	235	45	12	13	2	297	16	10	13	18	20	24	18	11	13	10	6	12	9	4	3	5
	Males	283	16	119	29	12	6	6	160	8	8	7	11	12	15	9	5	8	7	1	8	7	2	1	4
	Females	236	9	106	16	7	5	1	137	8	4	6	7	5	13	9	6	8	3	5	4	2	2	2	1
	Unknown	9																							
Huron	Total	262	12	69	13	0	2	6	96	18	10	13	12	11	9	7	2	4	8	7	8	4	10	17	2
	Males	138	7	42	6	2	2	3	53	10	5	6	5	4	6	6	2	1	3	4	4	2	8	9	1
	Females	114	5	27	7	4	4	3	43	8	5	7	6	7	3	1	2	4	5	4	2	2	9	8	1
Ingham	Total	471	23	64	11	8	4	4	91	18	19	21	17	18	14	11	19	16	22	27	30	29	36	32	8
	Males	222	13	35	4	5	2	3	46	8	12	9	2	9	1	4	9	10	12	16	10	15	21	14	2
	Females	248	8	29	7	3	2	1	42	10	7	12	15	9	13	15	7	6	10	11	20	14	15	18	6
	Unknown	1	1																						
Ionia	Total	274	9	27	4	3	6	5	45	10	7	11	14	10	9	6	4	11	10	14	23	19	27	22	3
	Males	134	5	15	2	4	2	3	26	2	5	6	9	5	4	5	4	6	7	6	12	11	16	16	3
	Females	139	3	12	1	1	2	3	19	8	2	5	5	5	5	4	2	8	4	8	7	8	11	14	3
	Unknown	1	1																						
Iosco	Total	99	8	31	3	4	2	2	42	3	1	4	10	3	4	5	1	1	4	2	3	3	1	2	1
	Males	55	3	16	2	1	2	2	23	2	1	2	3	2	2	2	1	1	1	4	2	2	2	2	1
	Females	43	4	15	1	3	2	2	19	1		2	7	1	2	3	1	1	4	2	1	1	1	1	
	Unknown	1	1																						
Iron	Total	37		12	2	3	1	1	18	2	2	2	2	4	1	2	3	1							
	Males	19		6	1	2	1	1	10	1	1	2	2	2	1	1	2	1							
	Females	18		6	1	1			8																
Isabella	Total	166	4	41	10	6	4	2	59	8	2	9	8	9	1	3	5	3	10	7	12	9	2	5	1
	Males	98	3	23	6	4	2	1	34	5	2	6	1	2	1	1	3	3	7	4	10	7	5	1	1
	Females	68	1	18	4	2	4	2	25	3	3	3	7	7	1	3	3	3	3	2	2	1	4		
Jackson	Total	467	28	51	12	5	6	4	79	10	9	17	17	11	21	12	11	18	21	32	29	42	33	53	3
	Males	250	15	28	5	2	4	4	43	4	6	7	14	6	10	14	11	24	11	22	16	28	18	29	3
	Females	217	10	23	7	4	2	2	36	6	3	10	13	3	11	6	7	8	10	13	13	16	15	24	
Kalamazoo	Total	445	14	48	14	3	2	4	71	5	10	23	16	16	20	25	13	21	31	20	27	37	35	7	6
	Males	237	8	26	8	3	2	3	42	3	6	5	13	8	9	15	11	15	21	15	17	19	20	6	1
	Females	207	5	22	6	2	1	1	29	2	4	5	16	8	11	12	8	16	16	9	10	18	16	15	1
	Unknown	1	1																						
Kalkaska	Total	39	1	5	2	3	1	1	11	1	1	1	1	1	2	1	3	3	1	2	2	4	1		
	Males	21		3	2	2	1	1	5	1	1	1	1	1	1	1	2	1	1	2	1	2	2	1	
	Females	18		2	2	1	1		6					2	2	2	2	2	2	1	1	1	1		
Kent	Total	1,183	59	212	61	28	15	11	327	42	30	38	54	52	69	42	32	39	41	53	59	62	73	41	8
	Males	617	31	117	31	14	5	6	173	27	11	18	23	20	29	22	16	21	27	35	28	43	46	18	5
	Females	564	26	95	30	14	10	5	154	15	19	20	31	32	40	20	16	19	14	17	33	32	23	32	3
	Unknown	2	2																						
Keweenaw	Total	19	2	9	1	1	1	1	11	1	1	1	1	1			1			1	1	1			
	Males	11	2	5	1	1	1	1	6								1								
	Females	8		4					5		1														

* Still-birth included.

† Still-births not included.

Table 76.—Continued.—Deaths by counties, by sex, by ages and five-year periods of age, 1894.

Counties.	Sex.	Total deaths at all ages, 1894.*	Ages in years.					Ages in periods of years.																		
			Under 1 year.†	1 to 2.	2 to 3.	3 to 4.	4 to 5.	Under 5 years.†	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unk.	
Lake	{Total Males	57	3	4	2	1	20	1	3	6	1	1	1	1	4	4	3	3	3	3	---	3	3	1	2	1
	{Females	30	2	5	2	1	10	---	---	5	1	---	---	---	---	3	---	---	---	---	---	---	2	1	1	---
Lapeer	{Total Males	202	11	29	5	1	37	5	7	3	11	9	4	7	10	4	11	8	11	18	14	9	17	6	2	
	{Females	109	9	16	3	2	21	3	1	2	5	3	3	3	4	5	---	8	5	6	13	7	7	6	2	
Leelanau	{Total Males	93	2	13	2	1	16	2	6	1	6	6	1	4	5	---	3	3	5	5	5	7	2	11	4	
	{Females	94	2	19	3	2	26	4	3	9	7	---	2	4	2	2	2	1	6	3	6	7	4	5	1	
Lenawee	{Total Males	54	2	11	3	2	15	2	3	5	5	---	1	1	1	1	---	5	2	4	4	2	4	2	1	
	{Females	40	---	8	---	1	11	2	---	4	2	---	---	---	---	---	---	1	1	1	2	3	2	1	---	
Livingston	{Total Males	428	8	42	8	3	61	4	8	15	21	13	14	13	11	15	20	19	32	37	37	46	38	16		
	{Females	213	7	26	4	1	34	3	5	2	7	6	4	3	5	7	8	13	13	19	21	30	17	9		
Luce	{Total Males	175	4	21	4	5	33	4	4	1	5	3	13	7	5	7	4	4	14	19	15	10	23	---		
	{Females	99	1	11	2	3	19	---	3	1	4	1	9	1	3	1	2	3	8	14	13	8	14	---		
Mackinac	{Total Males	76	3	10	2	2	14	4	---	---	---	2	4	6	2	6	2	1	6	5	5	2	9	---		
	{Unknown.	17	---	5	---	---	6	---	---	1	1	---	---	---	---	---	---	---	---	---	---	---	---	---		
Macomb	{Total Males	12	1	4	1	5	5	---	---	1	1	---	---	---	---	---	---	---	---	---	---	---	---	---		
	{Females	4	---	1	---	1	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Manistee	{Total Males	58	3	18	3	1	22	2	2	1	3	1	2	3	3	1	1	2	2	3	1	1	3	2		
	{Females	27	3	9	1	---	10	---	---	1	2	1	---	---	---	---	---	---	---	---	---	---	---	---		
Manitou	{Total Males	31	---	9	2	1	12	2	2	---	1	---	2	2	2	1	2	2	2	3	1	1	3	2		
	{Females	291	5	56	9	5	79	7	2	11	13	9	7	4	8	8	7	12	17	23	25	19	35	---		
Manitowish	{Total Males	165	4	37	2	2	49	---	8	5	2	4	2	4	2	4	5	8	9	15	14	10	24	---		
	{Females	126	1	19	2	3	30	7	2	3	8	7	3	2	4	6	2	4	8	8	11	9	11	---		
Manitowish	{Total Males	246	19	78	12	8	103	6	9	14	13	5	8	12	5	5	2	10	11	9	9	2	7	---		
	{Females	144	13	45	5	6	59	5	4	5	7	6	5	4	6	4	3	5	8	4	4	1	5	---		
Manitowish	{Total Males	102	6	33	7	2	44	1	2	4	7	7	4	6	1	2	2	5	3	5	8	4	1	2	---	
	{Females	18	5	3	---	6	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Manitowish	{Total Males	14	2	3	---	4	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	{Females	4	---	1	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		

DEATHS BY COUNTIES, SEX AND AGES.

Marquette	Total	356	30	1	126	13	2	17	31	12	13	11	17	11	10	13	15	10	7	2	8	3	3
	Males	231	16	5	72	6	1	5	11	2	4	3	8	9	4	7	9	7	7	3	4	5	3
	Females	145	14	1	64	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mason	Total	180	10	7	68	9	8	13	6	6	6	4	7	4	5	5	8	6	5	3	5	2	2
	Males	90	7	1	32	6	2	6	2	3	3	2	7	4	3	3	1	4	4	1	1	4	1
	Females	90	3	2	36	3	6	7	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mecosta	Total	187	13	1	43	2	4	15	12	11	4	3	5	9	8	4	3	12	10	5	9	7	7
	Males	106	5	1	24	1	5	5	5	3	1	2	5	6	8	3	2	7	9	4	6	6	1
	Females	79	6	1	19	1	3	10	7	8	3	6	3	3	3	1	1	5	1	1	1	3	1
Menominee	Unknown	2	2																				
	Total	280	19	7	140	9	8	11	17	14	7	9	7	11	7	8	5	5	1	1	5	1	1
	Males	165	10	5	68	7	2	3	12	9	5	4	4	5	1	2	1	4	5	1	1	5	9
Midland	Females	122	6	4	72	2	1	8	5	5	4	4	5	1	2	1	2	1	1	1	2	2	2
	Unknown	3	3																				
	Total	113	8	3	35	9	2	5	7	2	2	3	5	2	1	3	3	6	6	8	5	5	5
Missaukee	Males	63	8	1	17	7	2	1	5	1	1	2	1	3	2	1	1	1	4	4	5	2	2
	Females	50	1	1	18	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1
	Unknown	3	3																				
Monroe	Total	355	15	7	82	7	8	14	17	12	9	12	5	16	14	15	26	15	19	33	35	1	1
	Males	168	6	2	44	3	6	5	3	2	3	5	1	9	5	6	14	8	9	16	22	13	1
	Females	187	9	2	38	3	5	8	12	10	6	7	9	9	9	9	12	7	10	17	23	1	1
Montcalm	Total	250	13	4	63	9	5	11	10	12	7	7	8	11	12	14	13	12	13	10	17	2	2
	Males	122	7	1	33	9	3	4	3	4	3	4	3	6	7	11	7	9	10	7	11	2	2
	Females	127	5	2	30	3	6	7	8	4	3	4	3	6	7	11	7	9	3	3	6	1	1
Montnurency	Unknown	1	1																				
	Total	13	1	4	4	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Males	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Muskegon	Females	344	20	4	111	17	6	11	13	9	9	17	11	16	12	18	8	14	21	13	18		
	Males	185	13	2	69	8	2	4	5	7	8	11	7	9	6	11	6	8	12	7	7		
	Females	148	6	1	42	9	4	7	8	2	6	6	4	7	6	7	2	6	9	6	11		
Newaygo	Unknown	1	1																				
	Total	108	5	3	30	4	3	8	6	5	10	2	3	3	3	5	3	5	3	4	1	2	2
	Males	55	3	1	17	2	2	3	3	7	1	2	1	2	1	2	3	3	2	1	3	1	1
Oakland	Females	43	2	1	13	2	1	2	3	3	7	1	1	1	2	3	3	2	2	1	1		
	Total	422	8	3	52	7	5	9	16	17	19	23	17	19	18	22	37	28	32	21	43	5	5
	Males	224	3	2	32	5	4	1	9	5	12	13	8	9	20	20	20	9	20	23	4	4	1
Oakland	Females	196	5	1	20	2	4	5	7	13	7	11	14	10	12	13	17	19	12	11	20	1	1

† Still-births not included.

* Still-births included.

Table 76.—CONCLUDED.—Deaths by counties, by sex, by ages and five-year periods of age, 1894.

Counties.	Sex.	Total deaths at all ages, 1894.*	Still-born.	Ages in years.					Ages in periods of years.																	
				Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	Under 5 years.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to and over.	Unk.
Oceana.....	{Total.....	129	5	21	6	4	4	3	40	4	2	5	9	3	3	5	3	5	6	2	6	10	9	7		
	{Males.....	81	3	10	2	2	2	3	23	2	2	4	7	—	2	4	2	4	5	3	3	7	6	3		
Ogemaw.....	{Total.....	13	—	8	1	1	—	—	5	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	{Males.....	7	—	3	1	1	—	—	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Ontonagon.....	{Total.....	48	10	11	2	—	—	—	13	—	1	—	—	1	2	5	2	1	—	—	3	3	3	2	2	
	{Males.....	31	7	6	1	—	—	—	7	—	—	—	—	—	2	3	2	1	—	—	2	2	3	2	2	
Osceola.....	{Total.....	153	8	31	14	5	2	2	54	6	3	5	7	6	9	8	6	8	2	8	5	4	4	4		
	{Males.....	77	6	13	6	1	2	1	23	3	3	4	3	2	6	1	2	3	1	5	4	3	1	4		
Oscoda.....	{Total.....	3	—	1	1	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	{Males.....	2	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Otsego.....	{Total.....	35	5	8	3	—	—	—	11	2	1	2	1	1	1	1	2	—	—	—	—	—	—	—		
	{Males.....	17	5	2	1	—	—	—	3	2	—	1	1	1	1	1	1	—	—	—	—	—	—	—		
Ottawa.....	{Total.....	358	24	63	24	5	6	2	100	10	10	17	18	14	13	10	8	9	11	14	19	29	21	1	1	
	{Males.....	178	13	32	16	1	3	2	54	4	6	5	5	3	2	6	4	5	4	6	4	7	12	14	15	
Presque Isle.....	{Total.....	180	11	31	8	4	3	—	46	6	4	12	13	12	7	6	3	5	5	7	7	15	4	9	1	
	{Males.....	47	2	11	2	1	2	—	16	4	4	3	1	1	1	1	1	1	3	2	4	4	1	1		
Roscommon.....	{Total.....	2	—	1	—	—	—	—	3	4	1	2	1	—	—	—	—	—	—	—	—	—	—	—		
	{Males.....	2	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Saginaw.....	{Total.....	919	56	212	54	11	14	13	304	46	29	38	30	28	32	42	36	32	29	30	42	28	49	24	35	9
	{Males.....	475	27	110	30	7	6	5	158	19	16	17	13	17	13	22	14	20	17	16	26	13	27	15	19	4
Saginaw.....	{Total.....	440	26	101	24	4	8	8	145	27	13	22	14	11	19	20	22	12	12	14	16	15	22	9	16	5
	{Males.....	4	3	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

DEATHS BY COUNTIES, SEX AND AGES.

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Sanilac	Total	274	8	56	10	3	3	72	6	8	12	15	12	11	8	13	10	13	13	20
	Males	157	7	30	6	---	---	38	2	3	10	7	5	4	5	9	7	4	9	16
	Females	117	1	26	4	2	2	34	4	5	5	8	7	6	4	4	3	9	4	4
Schoolcraft	Total	91	3	27	2	2	2	33	4	1	2	5	2	3	2	1	1	1	2	2
	Males	63	3	16	---	---	---	18	4	1	1	6	5	2	2	1	---	---	---	---
	Females	27	---	11	2	1	1	15	---	---	---	---	---	---	---	---	1	---	---	---
Shiawassee	Total	250	1	39	9	5	6	64	15	8	16	6	7	6	7	9	8	15	11	15
	Males	121	1	23	3	1	2	30	7	3	8	3	2	2	3	5	5	9	3	8
	Females	129	---	16	6	4	4	34	8	5	8	3	5	4	4	4	3	6	8	7
St. Clair	Total	493	20	120	19	11	8	168	15	14	18	27	25	22	17	12	14	14	14	27
	Males	276	9	67	10	6	4	91	12	8	9	8	13	10	5	6	10	10	20	27
	Females	217	11	53	9	5	4	77	3	6	9	19	12	12	7	6	4	4	4	7
St. Joseph	Total	244	9	27	5	4	2	39	4	1	6	7	6	10	6	5	13	7	12	11
	Males	120	2	17	4	1	2	25	1	---	2	4	3	4	4	4	7	1	6	6
	Females	124	7	10	1	3	---	14	3	1	4	3	3	6	2	1	6	6	5	5
Tuscola	Total	192	6	34	4	1	1	41	8	7	6	8	10	8	5	12	10	12	15	10
	Males	105	5	15	3	---	---	18	6	4	1	4	2	3	6	7	8	6	13	5
	Females	87	1	19	1	1	1	23	2	3	5	4	6	6	2	6	3	2	6	5
Van Buren	Total	326	17	46	7	6	1	60	6	5	10	8	11	10	9	12	15	15	28	15
	Males	177	11	27	3	3	1	34	2	1	4	5	3	6	7	5	8	6	8	9
	Females	149	6	19	4	3	---	26	4	4	6	3	8	4	2	5	4	9	7	14
Washtenaw	Total	394	23	48	15	6	2	72	5	8	14	19	19	17	19	11	15	18	16	25
	Males	206	12	31	4	4	1	41	3	1	8	8	2	9	13	4	8	9	11	16
	Females	185	9	17	11	2	1	31	2	7	6	11	17	8	6	7	7	9	5	9
Wayne	Total	3,443	142	812	196	88	49	1,202	169	78	123	154	148	127	162	118	109	115	99	138
	Males	1,859	78	436	105	46	20	639	96	45	77	67	58	59	71	62	58	65	51	62
	Females	1,578	58	376	91	42	29	563	73	33	66	86	77	60	77	60	44	37	52	76
Wexford	Total	117	10	28	9	7	4	49	5	3	6	2	1	3	5	2	7	1	2	3
	Males	64	5	15	7	4	1	27	2	3	3	1	1	1	1	2	5	2	1	1
	Females	53	5	13	2	3	3	22	3	---	---	---	---	---	---	---	---	---	---	---

* Still-births included.

† Still-births not included.

DEATH-RATES OF INFANTS UNDER 1 YEAR, AND OF CHILDREN UNDER 5 YEARS, BY COUNTIES.

If the deaths of infants under 1 year of age, and of children under 5 years of age, be compared with the corresponding populations of each county, as ascertained by the State census taken in June, 1894, we shall have the death-rate set forth in the following tabular arrangement. The counties are grouped, for convenience of apprehension, into four divisions: (1) Counties having rates over 50 per cent above the average; (2) counties having rates above the average, but less than 50 per cent above it; (3) counties below the average, but not 50 per cent below it; (4) counties more than 50 per cent below the average.

Death-rates of infants under 1 year of age and of children under 5 years of age per 1,000 population of like age in Michigan during the year 1894, by counties.

Groups.	Infants under 1 year.	Children under 5 years.
1. Over 50 per cent above the average.	Crawford, 125.0; Houghton, 134.1; Maniton, 129.0.	Alger, 37.8; Crawford, 46.9; Houghton, 41.5; Maniton, 53.1; Menominee, 35.0.
2. Less than 50 per cent above the average.	Alger, 81.1; Alpena, 84.0; Bay, 87.6; Benzie, 92.9; Cheboygan, 94.1; Chippewa, 76.4; Dickinson, 101.7; Emmet, 89.5; Gogebic, 81.8; Grand Traverse, 100.2; Ingham, 81.4; Iosco, 81.8; Keweenaw, 103.4; Lake, 81.3; Macomb, 78.2; Mani-tee, 86.7; Mason, 82.4; Menominee, 109.4; Midland, 82.7; Muskegon, 77.4; Saginaw, 104.9; Schoolcraft, 106.3; St. Clair, 93.5; Wayne, 103.5.	Baraga, 28.2; Bay, 22.8 (mean); Benzie, 31.3; Cheboygan, 25.0; Dickinson, 33.9; Emmet, 26.0; Gogebic, 32.3; Grand Traverse, 27.0; Ingham, 24.9; Iosco, 23.7; Kent, 23.4; Keweenaw, 27.2; Lake, 29.7; Manistee, 25.3; Marquette, 22.9; Mason, 26.4; Muskegon, 23.1; Osceola, 25.3; Saginaw, 30.7; Schoolcraft, 32.1; St. Clair, 27.0; Wayne, 33.2; Wexford, 26.2.
Average.	State: 75.3 per 1,000.	State: 22.8 per 1,000.
3. Less than 50 per cent below the average.	Allegan, 73.6; Antrim, 52.2; Arenac, 52.6; Baraga, 65.7; Berrien, 51.2; Branch, 52.9; Calhoun, 61.5; Cass, 46.3; Charlevoix, 58.2; Clare, 42.7; Clinton, 41.3; Delta, 56.5; Eaton, 65.1; Genesee, 61.2; Gratiot, 62.4; Hillsdale, 37.9; Huron, 69.2; Ionia, 42.5; Iron, 63.5; Isabella, 68.4; Jackson, 55.1; Kalamazoo, 56.5; Kent, 72.3; Lapeer, 46.7; Leelanau, 75.1; Leewards, 46.8; Livingston, 52.9; Luce, 53.2; Mackinac, 72.0; Marquette, 69.2; Mecosta, 62.6; Missaukee, 64.0; Monroe, 59.3; Montcalm, 54.8; Newaygo, 38.7; Oakland, 48.7; Oceana, 54.0; Ontonagon, 47.0; Osceola, 72.3; Otsego, 62.0; Ottawa, 59.1; Presque Isle, 52.4; Sanilac, 59.8; Shiawassee, 65.3; St. Joseph, 62.5; Tuscola, 41.2; Van Buren, 72.6; Washtenaw, 59.4; Wexford, 68.1.	Allegan, 20.0; Alpena, 22.7; Antrim, 16.0; Arenac, 14.2; Bay, 22.8 (mean); Berrien, 14.3; Branch, 17.8; Calhoun, 15.9; Cass, 15.2; Charlevoix, 16.7; Chippewa, 20.1; Clinton, 15.9; Delta, 16.6; Eaton, 16.9; Genesee, 18.8; Gratiot, 14.2; Huron, 20.1; Ionia, 14.0; Iron, 19.2; Isabella, 21.0; Jackson, 19.4; Kalamazoo, 17.5; Kalkaska, 16.2; Lapeer, 12.6; Leelanau, 19.4; Leewards, 13.8; Livingston, 17.8; Luce, 16.3; Mackinac, 21.2; Macomb, 22.0; Mecosta, 16.9; Midland, 19.0; Missaukee, 18.0; Monroe, 21.8; Montcalm, 15.8; Newaygo, 11.9; Oakland, 14.0; Oceana, 20.0; Ontonagon, 15.0; Otsego, 17.5; Ottawa, 19.8; Presque Isle, 18.3; Sanilac, 16.2; Shiawassee, 20.0; St. Joseph, 18.1; Van Buren, 18.9; Washtenaw, 18.4.
4. Over 50 per cent below the average.	Alcona, 17.0; Barry, 24.7; Gladwin, 36.2; Kalkaska, 36.8; Montmorency, 32.8; Ogemaw, 16.8; Oscoda, 17.2; Roscommon, 0.	Alcona, 11.0; Barry, 8.2; Clare, 9.9; Gladwin, 7.1; Hillsdale, 10.5; Montmorency, 10.8; Ogemaw, 5.7; Oscoda, 7.7; Roscommon, 5.5; Tuscola, 10.0.

It is, of course, understood that such an arrangement as the above affords merely a rough grouping, since the four divisions made include a wide range of variation in themselves. In certain counties, moreover, the returns are so imperfect that their positions in the table have no significance. Statisticians object to the use of death-rates for infants under 1 year of age, on account of the inaccuracy of censuses in reporting the true population under 1 year; too few being stated, the death-rates based thereon are higher than they should be. This objection is counterbalanced for Michigan by the fact that the deaths returned under 1 year, as at

all ages, are much less than the truth for each county, and hence these errors tend to neutralize themselves somewhat. For purposes of comparison of the counties, one with another, it is immaterial that the rates be exactly correct, if only about the same percentage of loss obtains. The returns of births for each county are imperfect, and consequently we have no sure basis of reference for stating the infant mortality as deaths of infants under 1 year per 1,000 births. On the whole it seemed better to use the census, with its known errors, rather than the enumeration of births, with its uncertain and variable imperfections, as the foundation of the exhibit.

Counties in groups 1 and 4 may safely be neglected, since their populations are sparse as a rule, and very few omissions in the enumeration for the year would cause their rates to vary widely. From this statement we may except Houghton, and, perhaps, Menominee counties, which show high death-rates for children under 5, and Houghton, the highest of any county in the State for infants under 1 year of age; also Barry, Hillsdale and Tuscola counties, showing very low rates for children under 5 years; Barry county has also a low rate for infants under 1 year.

More counties fall in group 3, having death-rates lower than the average, than in group 2, with death-rates higher than the average. As a consequence, we find that the counties contained in group 2 are those having the largest populations of the State, including Bay (for infants; its child-mortality is exactly the average for the State), Kent (for children under 5 years), Saginaw and Wayne. We also note that counties of the upper peninsula and northern part of the lower peninsula appear in this group.

The results for a single year, as presented above, are not sufficient for extensive generalization. The present Report being the first in which statements of deaths, by counties, at each year of age under 5, appear, it will be necessary to wait for several years before a quinquennial average can be obtained which will permit more satisfactory deductions. It will be necessary, even then, to eliminate those counties making notoriously imperfect returns, but with this allowance, properly made, it is believed that a table and map representing similar facts to the above can be prepared, which will be of great sanitary interest and suggestiveness.

Tables 77 and 78 give the facts in detail in regard to the number of persons of each sex who died at all ages during each month of the year 1894. Table 77 is condensed from Table 78, and states the ages in periods of five years. Table 78 gives the number for each year of age separately, and also the number of deaths at each month of age for children dying under the age of one year. These tables, as printed in the present Report and that for the preceding two years differ from those previously published in that the number of still-births is separately stated, and the number of deaths under one year of age, and also under five years of age, is stated both inclusive and exclusive of still-births. The former statement is made in order that the data may be readily comparable with former Reports; the latter, because for many purposes it is important to eliminate still-births, as, when included, they unduly increased the number of deaths for the first month and for the first year of age as compared with those of subsequent years. The death-rates of children born alive are the important points of consideration in discussing infant mortality; their variations at different ages serve not only to mark the dangerous periods of development, but suggest the necessity of special study of the management of infants and the treatment of the diseases to which they are especially liable at those ages, and thus may bring about a marked lowering of this special class of mortality. The introduction of still-births into this class of deaths adds a large number of deaths dependent on entirely different causes, for the most part, and not subject to amelioration by the same sanitary and therapeutic measures.

Table 77.—*Exhibiting, by sex and by ages, in periods of years, the number of persons returned as having died in Michigan during the year 1894. (Still-births included.)*

Ages in periods of years.	Sex.	Year, 1894.	Months, 1894.												
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
All ages.....	Total.....	20,369	1,404	1,272	1,641	1,727	1,703	1,619	1,668	2,024	2,047	2,007	1,845	1,975	25
	Males.....	11,159	730	678	859	936	905	867	921	1,098	1,045	1,043	967	1,056	14
	Females.....	9,744	667	599	779	788	796	748	742	921	967	959	875	913	10
	Unknown.....	56	7	5	3	8	4	4	5	5	5	5	3	6	1
Still-births..	Total.....	1,002	78	64	85	89	98	82	76	82	64	78	105	106	---
	Males.....	549	41	33	53	43	56	46	40	47	34	41	54	61	---
	Females.....	402	26	26	29	43	38	32	31	31	25	33	49	39	---
	Unknown.....	51	6	5	3	8	4	4	5	4	5	4	2	6	---
Under 1*.....	Total.....	4,181	231	200	293	291	274	263	378	571	564	439	325	350	2
	Males.....	2,298	132	122	172	167	147	146	204	307	310	225	174	190	2
	Females.....	1,881	98	78	121	124	127	117	174	264	254	214	150	160	---
	Unknown.....	2	1	---	---	---	---	---	---	---	---	---	1	---	---
Under 5*.....	Total.....	6,018	322	303	432	429	410	378	534	805	798	620	496	497	2
	Males.....	3,280	182	168	249	252	219	200	293	435	425	310	263	262	2
	Females.....	2,755	139	137	183	177	191	178	241	370	373	309	222	235	---
	Unk own.....	8	1	---	---	---	---	---	---	---	---	1	1	---	---
Under 1†.....	Total.....	5,193	304	264	378	380	372	345	454	653	628	517	480	456	2
	Males.....	2,847	173	155	225	210	203	192	244	354	344	266	228	251	2
	Females.....	2,283	124	104	150	167	165	149	205	295	279	247	199	199	---
	Unknown.....	53	7	5	8	3	4	4	5	4	5	4	5	6	---
Under 5†.....	Total.....	7,020	395	369	517	519	508	460	610	887	862	698	591	603	2
	Males.....	3,909	223	201	302	295	275	246	338	492	459	351	271	274	2
	Females.....	3,157	165	163	212	220	229	210	272	401	398	342	271	274	---
	Unknown.....	54	7	5	3	3	4	4	5	4	5	5	5	6	---
5 to 10.....	Total.....	780	52	46	50	67	61	59	38	57	69	75	89	96	1
	Males.....	399	21	23	25	39	27	33	19	26	37	39	50	60	---
	Females.....	361	31	23	25	28	34	26	19	31	32	36	39	36	1
10 to 15.....	Total.....	490	30	33	34	41	39	31	39	45	37	51	54	56	---
	Males.....	241	16	12	14	20	17	16	21	28	20	22	30	25	---
	Females.....	249	14	21	20	21	22	15	18	17	17	29	24	31	---
15 to 20.....	Total.....	768	52	31	60	63	60	69	67	75	63	77	66	85	---
	Males.....	336	20	12	24	26	17	32	38	35	20	35	36	41	---
	Females.....	432	32	19	36	37	43	37	29	40	43	42	30	44	---
20 to 25.....	Total.....	943	56	51	79	78	77	95	86	72	86	99	99	65	---
	Males.....	425	27	27	39	36	31	34	42	41	39	50	40	35	---
	Females.....	518	34	24	50	43	46	61	44	31	47	49	59	30	---
25 to 30.....	Total.....	813	40	60	72	67	59	74	59	73	82	77	75	74	1
	Males.....	361	17	34	32	27	28	34	26	35	33	37	30	31	---
	Females.....	452	23	26	40	40	31	40	33	38	44	44	43	44	1
30 to 35.....	Total.....	776	54	59	57	61	93	57	64	64	67	59	63	72	1
	Males.....	373	24	27	27	25	47	34	30	35	40	29	23	31	1
	Females.....	398	22	35	30	36	46	23	34	29	27	30	45	41	---
35 to 40.....	Total.....	796	58	52	81	67	67	75	53	63	61	86	74	56	3
	Males.....	394	25	25	37	36	42	31	29	33	37	41	31	25	2
	Females.....	402	33	27	44	31	25	44	24	30	24	45	43	31	1
40 to 45.....	Total.....	656	49	44	49	50	51	57	57	48	61	79	49	60	2
	Males.....	309	24	26	22	26	24	28	30	16	25	36	27	24	1
	Females.....	347	25	18	27	24	27	29	27	32	36	43	22	36	1

* Still-births not included.

† Still-births included.

Table 77.—CONCLUDED.—Deaths by periods of age, sex and months.

Ages in periods of years.	Sex.	Year, 1894.	Months, 1894.												
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
45 to 50.	Total.....	718	50	53	70	65	64	55	65	60	55	59	60	62	---
	Males.....	379	28	29	32	30	36	35	44	28	30	30	31	28	---
	Females.....	339	22	24	38	35	28	20	21	32	25	29	29	34	---
50 to 55.	Total.....	776	55	39	66	83	73	49	49	58	54	84	76	80	1
	Males.....	449	32	17	31	58	43	27	24	36	32	49	46	54	---
	Females.....	327	23	22	35	25	30	22	25	22	22	35	30	26	---
55 to 60.	Total.....	787	57	45	56	56	79	66	60	81	70	66	61	88	2
	Males.....	451	30	28	29	35	43	39	37	49	40	36	34	49	---
	Females.....	336	27	17	27	21	36	27	23	32	30	30	27	39	---
60 to 65.	Total.....	998	73	60	93	94	95	90	69	83	67	86	82	104	2
	Males.....	536	39	36	53	62	53	55	36	48	41	48	55	60	---
	Females.....	412	34	24	40	32	42	35	33	35	26	38	27	44	---
65 to 70.	Total.....	1,005	69	67	67	79	94	92	78	91	96	89	81	100	2
	Males.....	573	40	38	36	49	58	54	46	47	50	56	37	60	---
	Females.....	432	29	29	31	30	36	38	32	44	46	33	44	40	---
70 to 75.	Total.....	1,141	82	70	97	105	93	106	79	82	103	100	103	121	---
	Males.....	646	41	43	52	52	54	56	50	53	54	61	53	68	---
	Females.....	495	41	27	45	53	39	50	20	29	49	39	50	53	---
75 to 80.	Total.....	967	84	59	75	93	73	82	87	74	85	87	89	99	---
	Males.....	533	50	32	53	46	41	51	47	46	51	59	51	56	---
	Females.....	404	34	27	22	47	32	31	40	28	34	28	38	43	---
80 to 85.	Total.....	741	76	56	61	69	52	48	52	54	69	57	72	74	1
	Males.....	413	40	29	34	40	29	29	26	31	42	27	44	42	1
	Females.....	328	36	27	27	29	23	19	27	23	27	30	28	32	---
85 to 90.	Total.....	839	81	28	30	29	24	24	25	25	27	38	26	32	---
	Males.....	183	13	16	14	12	14	17	17	14	11	22	18	15	---
	Females.....	156	18	12	16	17	10	7	8	11	16	16	8	17	---
90 to 95.	Total.....	129	19	24	9	12	6	4	9	5	12	11	9	9	---
	Males.....	63	7	13	5	5	3	2	4	3	4	6	5	6	---
	Females.....	66	12	11	4	7	3	2	5	2	8	5	4	3	---
95 to 100.	Total.....	32	2	1	3	5	4	2	1	3	2	2	3	4	---
	Males.....	19	2	1	2	3	4	1	---	1	2	---	1	2	---
	Females.....	13	---	---	1	2	---	1	1	2	---	2	2	2	---
100 and over.	Total.....	7	2	1	---	---	1	---	1	1	---	1	---	---	---
	Males.....	3	1	---	---	---	1	---	---	1	---	---	---	---	---
	Females.....	4	1	1	---	---	---	---	1	---	---	1	---	---	---
Unknown.	Total.....	277	18	24	15	25	32	24	20	23	19	26	18	26	7
	Males.....	159	7	12	6	15	18	13	14	12	13	13	11	22	3
	Females.....	116	11	12	9	10	14	11	6	10	6	13	7	4	3
	Unknown.	2	---	---	---	---	---	---	---	1	---	---	---	---	1

Table 78.—Exhibiting, by sex and by months, the number returned as having died in Michigan during the year 1894, at each and every age, the age stated in twelfths of a year for those under one year, and in years for those over one year of age. (Still-births included.)

Ages in years.	Sex.	Year, 1894.	Months, 1894.												
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
All ages.....	Total.....	20,969	1,404	1,272	1,641	1,727	1,705	1,619	1,688	2,024	2,047	2,007	1,845	1,975	25
	Males.....	11,159	730	678	859	936	905	867	921	1,068	1,085	1,043	967	1,056	14
	Females.....	9,744	667	589	779	788	796	748	742	921	957	959	875	918	10
	Unknown.....	56	7	5	3	3	4	4	5	5	5	5	3	6	1
Still-births.....	Total.....	1,002	73	64	85	89	98	82	76	82	64	78	105	106	..
	Males.....	549	41	33	53	43	56	46	40	47	34	41	54	61	..
	Females.....	402	26	26	29	43	38	32	31	31	25	33	49	39	..
	Unknown.....	51	6	5	3	3	4	4	5	4	5	4	2	6	..
Under 1-12*	Total.....	1,396	85	83	114	122	128	99	111	136	121	139	127	130	1
	Males.....	775	45	55	62	70	72	56	54	75	66	68	78	73	1
	Females.....	619	39	28	52	52	56	43	57	61	55	71	48	57	..
	Unknown.....	2	1	..	..	..	..	..	..	..	..	1	..	..	..
Under 1-12†	Total.....	2,894	158	147	189	211	226	181	197	218	188	217	232	286	1
	Males.....	1,824	96	88	115	118	128	102	94	122	100	109	133	134	1
	Females.....	1,021	65	54	81	95	94	75	89	92	80	104	97	96	..
	Unknown.....	59	7	5	3	3	4	4	5	4	5	4	3	6	..
1-12.....	Total.....	415	22	24	39	25	23	23	28	55	52	43	40	41	..
	Males.....	232	17	11	21	14	11	13	20	39	31	18	17	20	..
	Females.....	183	5	13	18	11	12	10	8	16	21	25	23	21	..
2-12.....	Total.....	361	16	15	28	32	25	28	27	51	58	32	20	32	..
	Males.....	202	9	10	20	16	16	13	15	26	30	17	11	19	..
	Females.....	159	7	5	8	16	9	15	12	25	23	15	9	13	..
3-12.....	Total.....	371	17	14	16	19	16	22	43	54	67	38	31	34	..
	Males.....	217	8	9	10	12	6	12	28	29	45	22	15	23	..
	Females.....	154	9	5	6	7	10	10	17	25	22	16	16	11	..
4-12.....	Total.....	285	13	10	8	13	14	12	22	61	57	40	18	17	..
	Males.....	153	9	7	7	9	8	7	16	34	29	18	4	5	..
	Females.....	132	4	3	1	4	6	6	6	27	28	22	14	12	..
5-12.....	Total.....	280	11	9	11	11	13	16	42	37	44	28	24	14	..
	Males.....	134	8	6	5	7	6	7	20	16	23	15	14	7	..
	Females.....	126	3	3	6	4	7	9	22	21	21	13	10	7	..
6-12.....	Total.....	227	15	6	12	14	7	14	25	36	40	27	12	19	..
	Males.....	131	8	2	5	10	3	10	14	17	24	19	9	10	..
	Females.....	96	7	4	7	4	4	4	11	19	16	8	3	9	..
7-12.....	Total.....	210	12	8	16	8	11	16	18	36	32	22	16	15	..
	Males.....	111	6	6	10	4	6	11	8	16	16	10	8	10	..
	Females.....	99	6	2	6	4	5	5	10	20	16	12	8	5	..
8-12.....	Total.....	196	15	13	13	11	7	9	16	34	22	26	13	17	..
	Males.....	108	10	7	8	4	3	6	10	20	8	16	6	10	..
	Females.....	88	5	6	5	7	4	3	6	14	14	10	7	7	..
9-12.....	Total.....	175	9	5	16	16	12	9	22	31	21	14	7	13	..
	Males.....	97	5	2	11	12	10	5	9	16	11	6	4	6	..
	Females.....	78	4	3	5	4	2	4	13	15	10	8	3	7	..
10-12.....	Total.....	146	8	4	9	8	8	9	13	20	27	17	8	14	1
	Males.....	74	4	3	7	3	3	6	7	8	12	9	6	5	1
	Females.....	72	4	1	2	5	5	3	6	12	15	8	2	9	..
11-12.....	Total.....	139	8	9	11	12	10	6	11	20	26	13	9	4	..
	Males.....	64	3	4	6	6	3	5	11	15	7	2	2	2	..
	Females.....	75	5	5	5	6	7	6	6	9	11	6	7	2	..

* Still-births not included.

† Still-births included.

Table 78.—CONTINUED.—Deaths by ages, sex and months.

Ages in years.	Sex.	Year, 1894.	Months, 1894.											
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
1	Total	924	42	46	65	84	71	51	79	124	144	84	75	59
	Males	497	26	22	36	54	39	23	48	72	70	45	34	28
	Females	427	16	24	29	30	32	28	31	52	74	39	41	31
2	Total	418	22	25	32	25	27	26	37	58	43	52	38	38
	Males	215	11	8	17	16	12	12	20	35	18	23	26	17
	Females	202	11	17	15	9	15	14	17	23	25	28	12	16
	Unknown	1										1		
3	Total	259	14	18	20	8	22	20	20	31	26	21	26	38
	Males	123	7	7	11	3	10	8	12	14	14	10	12	15
	Females	136	7	11	9	5	12	12	8	17	12	11	14	18
4	Total	236	13	16	22	21	16	18	20	21	21	24	22	22
	Males	127	6	9	18	12	11	11	9	7	13	7	17	12
	Females	109	7	7	9	9	5	7	11	14	8	17	5	10
5	Total	201	12	11	13	21	17	18	13	16	17	19	20	24
	Males	110	5	6	7	16	7	10	6	8	9	7	14	15
	Females	91	7	5	6	5	10	8	7	8	8	12	6	9
6	Total	186	19	15	10	14	11	13	6	11	18	22	30	17
	Males	98	8	8	6	5	6	7	3	5	12	11	12	15
	Females	88	11	7	4	9	5	6	3	6	6	11	18	2
7	Total	150	11	6	12	9	15	12	5	10	16	8	15	31
	Males	82	5	3	6	7	7	8	1	5	7	4	9	20
	Females	68	6	3	6	2	8	4	4	5	9	4	6	11
8	Total	120	5	10	5	17	11	7	6	8	9	12	15	14
	Males	58		4	3	9	5	3	4	3	5	6	9	7
	Females	62	5	6	2	8	6	4	2	5	4	6	6	7
9	Total	103	5	4	10	6	7	9	8	12	9	14	9	10
	Males	51	3	2	3	2	2	5	5	5	4	11	6	3
	Females	52	2	2	7	4	5	4	3	7	5	3	3	7
10	Total	116	6	8	8	11	5	8	9	12	7	13	13	16
	Males	59	2	2	2	6	4	5	4	7	5	6	9	7
	Females	57	4	6	6	5	1	3	5	5	2	7	4	9
11	Total	86	5	3	9	5	10	5	5	10	10	7	8	9
	Males	43	4	1	5	4	4	2	2	6	6	2	4	3
	Females	43	1	2	4	1	6	3	3	4	4	5	4	6
12	Total	103	4	7	3	8	7	3	11	13	4	15	15	13
	Males	54	3	2		4	1	1	7	9	4	8	10	5
	Females	49	1	5	3	4	6	2	4	4	4	7	5	8
13	Total	80	2	5	5	9	11	7	10	3	3	6	7	12
	Males	35		3	2	2	5	4	5	2	1	3	1	7
	Females	45	2	2	3	7	6	3	5	1	2	3	6	5
14	Total	105	13	10	9	8	6	8	4	7	13	10	11	6
	Males	50	7	4	5	4	3	4	3	4	4	3	6	3
	Females	55	6	6	4	4	3	4	1	3	9	7	5	3
15	Total	121	7	5	14	7	8	11	12	14	9	14	8	12
	Males	45	3	2	3	2	2	4	6	2	2	5	4	6
	Females	76	4	3	11	5	6	7	6	12	7	9	4	6
16	Total	133	12	3	8	14	14	8	10	14	14	13	8	15
	Males	52	6	1	2	6	4	3	4	8	4	5	4	5
	Females	81	6	2	6	8	10	5	6	6	10	8	4	10
17	Total	162	11	12	15	15	11	6	18	15	12	14	19	14
	Males	67	4	3	6	2	6	2	10	9	4	5	8	8
	Females	95	7	9	9	13	5	4	8	6	8	9	11	6
18	Total	174	9	7	9	13	15	20	12	17	13	16	16	27
	Males	82	3	4	3	7	11	10	9	7	4	8	9	14
	Females	92	6	3	6	6	4	10	3	10	9	8	7	13

Table 78.—CONTINUED.—Deaths by ages, sex and months.

Ages in years.	Sex.	Year, 1894.	Months, 1894.											
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
19	{ Total Males Females	178 90 88	13 4 9	4 2 2	14 10 4	14 9 5	12 1 11	24 13 11	15 9 6	15 9 6	15 6 9	20 8 12	15 11 4	17 8 9
20	{ Total Males Females	194 81 113	11 5 6	11 8 3	13 3 10	16 8 8	17 4 13	19 11 15	11 5 6	15 9 6	20 10 10	15 7 8	32 11 21	14 7 7
21	{ Total Males Females	193 102 91	10 4 6	11 5 6	14 5 9	15 5 6	17 10 7	22 9 13	19 8 11	15 9 6	19 9 10	23 16 7	16 10 6	12 8 4
22	{ Total Males Females	187 88 99	7 1 6	7 5 2	23 11 12	21 10 11	16 5 11	19 6 13	16 10 6	13 7 6	12 6 6	19 12 7	21 13 12	13 6 7
23	{ Total Males Females	177 77 100	14 8 6	6 2 4	11 4 7	15 5 10	10 5 5	17 7 10	19 9 10	15 9 6	18 8 10	22 10 12	18 5 13	12 5 7
24	{ Total Males Females	192 77 115	14 4 10	16 7 9	18 6 12	11 3 8	17 8 10	18 10 10	21 7 11	14 10 7	17 6 11	20 5 15	12 5 7	14 9 5
25	{ Total Males Females	171 78 93	12 5 7	13 8 5	13 5 8	13 6 7	13 8 5	17 9 8	13 5 8	10 5 6	15 7 8	15 6 9	23 7 16	13 8 5
26	{ Total Males Females	166 85 81	4 1 3	12 8 4	14 5 9	17 9 8	17 9 8	13 11 9	11 9 2	12 7 5	19 11 8	16 10 6	20 8 12	11 4 7
27	{ Total Males Females	160 64 96	12 4 8	11 7 4	14 6 8	16 3 13	12 5 7	11 4 7	13 4 9	15 7 8	20 10 10	16 5 11	10 5 5	10 4 6
28	{ Total Males Females	178 69 109	5 2 3	14 7 7	18 9 9	12 3 9	13 5 8	16 7 9	12 4 8	17 6 11	16 5 11	18 7 11	15 5 10	22 9 13
29	{ Total Males Females	138 65 73	7 5 2	10 5 6	13 7 6	9 6 3	4 1 3	17 10 7	10 4 6	19 11 8	12 5 7	12 5 7	7 2 5	18 5 13
30	{ Total Males Females	172 92 80	12 5 7	13 7 6	9 7 2	17 7 10	24 13 11	11 7 4	14 9 5	11 7 4	22 10 10	10 5 5	13 4 9	15 8 7
31	{ Total Males Females	116 66 50	10 6 4	10 3 7	9 3 6	7 2 5	10 9 1	10 7 3	15 6 9	7 5 2	6 5 2	10 6 4	13 8 5	9 7 2
32	{ Total Males Females	177 86 91	11 8 3	13 6 7	19 10 9	10 1 9	27 13 14	15 9 6	18 4 14	16 9 7	13 10 3	11 5 6	10 4 6	14 7 7
33	{ Total Males Females	153 66 87	12 8 4	11 4 7	14 4 10	13 8 5	19 6 13	12 6 6	8 4 4	12 6 6	10 7 3	16 8 8	14 3 11	12 2 10
34	{ Total Males Females	158 68 90	9 5 4	12 4 8	6 3 3	14 7 7	13 6 7	9 5 4	9 7 2	18 8 10	16 7 9	12 5 7	18 4 14	22 3 15
35	{ Total Males Females	185 91 94	13 4 9	10 5 5	27 13 14	13 8 5	18 11 7	19 7 12	9 3 6	15 8 7	13 7 6	20 12 8	19 7 12	9 6 3
36	{ Total Males Females	153 68 85	13 5 8	8 4 4	13 4 9	12 7 5	10 5 5	21 11 10	12 5 7	12 7 5	10 7 3	18 15 14	15 5 10	8 3 5

Table 78.—CONTINUED.—Deaths by ages, sex and months.

Ages in years.	Sex.	Year, 1894.	Months, 1894.												
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
37.....	{ Total..... Males..... Females.....	130 57 73	12 5 7	10 5 5	15 6 9	18 8 10	4 4 7	10 3 7	5 1 4	11 6 5	14 6 8	15 8 7	10 5 5	5 5 5	1 1 1
38.....	{ Total..... Males..... Females.....	184 92 92	9 6 3	12 4 8	15 9 6	15 8 7	22 11 11	14 3 11	16 11 5	13 5 8	12 8 4	16 7 9	16 5 11	23 14 9	1 1 1
39.....	{ Total..... Males..... Females.....	144 86 58	11 5 6	12 7 5	11 5 6	9 5 4	13 11 2	11 7 4	11 9 2	12 7 5	12 9 3	17 10 7	14 9 5	11 2 9	1 1 1
40.....	{ Total..... Males..... Females.....	161 76 85	7 3 4	19 7 3	12 7 5	11 4 7	15 6 9	16 10 6	16 9 7	12 7 11	19 7 12	19 11 8	12 5 7	12 6 6	1 1 1
41.....	{ Total..... Males..... Females.....	92 57 35	12 7 5	19 7 3	6 5 1	12 8 4	2 2 4	10 6 4	9 5 4	3 1 2	5 4 1	10 7 6	7 5 2	6 3 3	1 1 1
42.....	{ Total..... Males..... Females.....	156 76 80	12 7 5	8 6 2	16 7 9	11 7 4	9 5 4	12 4 8	10 5 5	8 4 4	20 10 10	17 6 11	13 8 5	19 7 12	1 1 1
43.....	{ Total..... Males..... Females.....	125 46 79	11 3 8	5 3 2	9 1 8	7 5 2	16 5 9	10 4 6	12 7 5	11 3 8	8 1 7	17 2 10	8 2 6	11 3 8	1 1 1
44.....	{ Total..... Males..... Females.....	122 54 68	7 4 3	11 3 8	6 2 4	9 2 7	9 4 5	9 4 5	10 4 6	14 7 7	9 3 6	16 8 8	9 7 2	12 5 7	1 1 1
45.....	{ Total..... Males..... Females.....	132 79 53	4 1 3	7 3 4	11 7 4	10 4 6	10 6 4	5 4 1	17 12 5	19 11 8	16 12 4	12 10 2	10 5 5	11 4 7	1 1 1
46.....	{ Total..... Males..... Females.....	152 76 76	13 8 5	12 5 7	11 6 5	18 10 8	13 10 4	12 6 6	14 9 5	11 6 10	13 6 7	18 6 7	10 5 5	12 5 7	1 1 1
47.....	{ Total..... Males..... Females.....	139 67 72	13 8 5	16 8 8	18 7 11	10 5 5	11 5 8	15 8 7	10 4 6	12 3 6	4 6 1	11 4 7	10 6 4	9 5 4	1 1 1
48.....	{ Total..... Males..... Females.....	152 77 75	10 6 4	10 6 4	18 6 12	17 6 11	14 8 6	10 8 2	9 7 2	10 6 4	12 4 8	10 5 5	16 10 6	16 5 11	1 1 1
49.....	{ Total..... Males..... Females.....	143 80 63	10 5 5	8 7 1	12 6 6	10 5 5	16 5 6	13 9 4	15 12 3	8 2 6	10 5 5	13 8 8	14 5 9	14 5 5	1 1 1
50.....	{ Total..... Males..... Females.....	166 100 66	12 10 2	7 1 6	11 1 10	24 19 5	19 15 4	11 6 5	8 3 5	10 8 2	10 6 4	16 10 6	16 11 5	21 10 11	1 1 1
51.....	{ Total..... Males..... Females.....	112 67 45	11 7 4	3 2 1	15 5 10	14 9 5	19 5 5	5 4 1	6 4 2	4 2 2	7 5 2	13 7 6	12 7 4	12 8 3	1 1 1
52.....	{ Total..... Males..... Females.....	178 103 75	15 7 8	8 4 4	18 8 5	21 17 4	14 8 10	15 8 7	13 7 6	12 7 5	9 4 4	23 15 8	14 10 4	21 11 10	1 1 1
53.....	{ Total..... Males..... Females.....	140 80 60	9 4 5	10 4 6	12 8 4	10 7 3	16 9 7	6 2 4	9 5 4	14 9 5	10 3 7	15 10 5	15 9 6	14 10 4	1 1 1
54.....	{ Total..... Males..... Females.....	180 99 81	8 4 4	11 6 5	15 9 6	14 6 8	14 10 4	12 7 5	13 5 8	18 5 8	18 13 5	17 7 10	19 8 11	21 14 7	1 1 1

Table 78.—CONTINUED.—Deaths by ages, sex and months.

Ages in years.	Sex.	Year, 1894.	Months, 1894.												
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
55	Total.....	151	8	14	8	12	13	13	9	19	11	11	10	21	2
	Males.....	98	4	6	6	8	9	9	5	16	8	6	5	14	2
	Females.....	53	4	8	2	4	4	4	4	3	3	5	5	7	..
56	Total.....	163	12	13	13	8	12	17	9	14	16	16	16	17	..
	Males.....	84	9	8	5	5	7	10	4	6	7	8	7	8	..
	Females.....	79	3	5	8	3	5	7	5	8	9	8	9	9	..
57	Total.....	154	11	4	12	7	23	14	16	15	16	14	10	12	..
	Males.....	80	5	4	6	4	10	7	9	9	7	8	6	5	..
	Females.....	74	6	..	6	3	13	7	7	6	9	6	4	7	..
58	Total.....	167	15	7	13	14	16	9	15	20	12	15	9	22	..
	Males.....	97	9	4	5	11	9	5	11	8	7	10	5	13	..
	Females.....	70	6	3	8	3	7	4	4	12	5	5	4	9	..
59	Total.....	152	11	7	10	15	15	13	11	13	15	10	16	16	..
	Males.....	92	3	6	7	7	8	8	8	10	11	4	11	9	..
	Females.....	60	8	1	3	8	7	5	3	3	4	6	5	7	..
60	Total.....	201	14	16	17	19	19	21	11	16	17	13	17	21	..
	Males.....	119	7	8	12	13	13	13	5	9	10	8	9	12	..
	Females.....	82	7	8	5	6	6	8	6	7	7	5	8	9	..
61	Total.....	123	11	11	12	5	12	12	14	9	10	7	14	6	..
	Males.....	77	6	6	7	1	9	10	9	5	8	4	8	4	..
	Females.....	46	5	5	5	4	3	2	5	4	2	3	6	2	..
62	Total.....	209	15	9	23	17	20	20	15	12	15	18	16	27	2
	Males.....	110	7	5	14	8	9	10	9	8	4	10	11	15	..
	Females.....	99	8	4	9	9	11	10	6	4	11	8	5	12	2
63	Total.....	218	22	13	19	23	23	14	11	21	13	22	13	24	..
	Males.....	136	13	9	9	17	14	8	6	12	10	13	10	15	..
	Females.....	82	9	4	10	6	9	6	5	9	3	9	3	9	..
64	Total.....	247	11	11	22	30	21	23	18	25	12	26	22	26	..
	Males.....	144	6	8	11	23	8	14	7	14	9	13	17	14	..
	Females.....	103	5	3	11	7	13	9	11	11	3	13	5	12	..
65	Total.....	219	11	13	11	20	30	19	15	15	24	23	14	18	1
	Males.....	114	7	10	6	10	17	10	9	4	9	15	5	11	1
	Females.....	105	4	3	5	10	13	9	6	11	15	8	9	7	..
66	Total.....	193	16	9	17	11	16	17	20	15	17	17	20	18	..
	Males.....	110	8	5	10	8	11	10	12	9	6	11	10	10	..
	Females.....	83	8	4	7	3	5	7	8	6	11	6	10	8	..
67	Total.....	205	10	13	15	18	20	23	12	18	21	15	13	27	..
	Males.....	126	7	10	7	11	13	15	5	14	11	11	7	15	..
	Females.....	79	3	3	8	7	7	8	7	4	10	4	6	12	..
68	Total.....	207	12	11	13	17	17	16	12	24	22	19	22	21	1
	Males.....	126	7	5	7	13	11	11	6	11	14	13	11	16	1
	Females.....	81	5	6	6	4	6	5	6	13	8	6	11	5	..
69	Total.....	181	20	16	11	13	11	17	19	19	12	15	12	16	..
	Males.....	97	11	8	6	7	6	8	14	9	10	6	4	8	..
	Females.....	84	9	8	5	6	5	9	5	10	2	9	8	8	..
70	Total.....	218	14	15	19	17	30	22	11	9	18	19	23	21	..
	Males.....	123	8	9	12	10	14	11	9	7	9	11	13	10	..
	Females.....	95	6	6	7	7	16	11	2	2	9	8	10	11	..
71	Total.....	172	12	14	16	13	15	12	16	12	13	12	15	22	..
	Males.....	106	7	10	9	7	9	4	14	8	8	7	7	16	..
	Females.....	66	5	4	7	6	6	8	2	4	5	5	8	6	..
72	Total.....	255	19	14	16	26	15	21	20	26	24	28	21	25	..
	Males.....	147	6	9	5	14	11	11	12	19	13	18	12	17	..
	Females.....	108	13	5	11	12	4	10	8	7	11	10	9	8	..

Table 78.—CONTINUED.—Deaths by ages, sex and months.

Ages in years.	Sex.	Year, 1894.	Months, 1894.											
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
73.	Total	218	12	13	23	21	10	22	16	18	22	20	22	19
	Males	118	7	8	12	10	4	13	12	10	13	11	10	8
	Females	100	5	5	11	11	6	9	4	8	9	9	12	11
74.	Total	278	25	14	23	28	23	29	16	17	26	21	22	34
	Males	152	13	7	14	11	16	17	12	9	11	14	11	17
	Females	126	12	7	9	17	7	12	4	8	15	7	11	17
75.	Total	240	26	9	22	28	16	23	21	12	26	21	14	22
	Males	138	13	4	15	14	6	15	13	5	18	16	8	11
	Females	102	13	5	7	14	10	8	8	7	8	5	6	11
76.	Total	223	15	11	16	23	18	14	17	22	21	20	20	26
	Males	126	7	9	11	9	10	9	9	18	11	12	9	12
	Females	97	8	2	5	14	8	5	8	4	10	8	11	14
77.	Total	175	9	15	11	12	13	11	18	15	19	12	23	17
	Males	104	8	5	10	4	6	7	10	8	11	9	15	11
	Females	71	1	10	1	8	7	4	8	7	8	3	8	6
78.	Total	189	16	15	15	17	14	17	15	15	10	22	18	15
	Males	111	9	8	9	10	9	11	7	8	4	13	13	10
	Females	78	7	7	6	7	5	6	8	7	6	9	5	5
79.	Total	160	18	9	11	13	12	17	16	10	9	12	14	19
	Males	104	13	6	8	9	10	9	8	7	7	9	6	12
	Females	56	5	3	3	4	2	8	8	3	2	3	8	7
80.	Total	160	19	11	14	13	11	13	7	16	19	8	14	15
	Males	85	8	4	8	6	7	7	4	8	13	3	7	10
	Females	75	11	7	6	7	4	6	3	8	6	5	7	5
81.	Total	124	14	6	17	9	10	10	8	10	11	9	10	9
	Males	67	7	4	9	7	4	2	3	7	7	7	7	2
	Females	57	7	2	8	2	6	8	5	3	4	2	3	7
82.	Total	153	14	12	12	17	8	2	11	10	11	15	18	23
	Males	86	7	8	5	11	3	1	5	5	9	7	11	14
	Females	67	7	4	7	6	5	1	6	5	2	8	7	9
83.	Total	152	11	13	9	20	13	11	15	11	15	14	12	8
	Males	86	6	7	7	11	9	9	6	8	6	7	7	3
	Females	66	5	6	2	9	4	2	9	3	9	7	5	5
84.	Total	152	18	14	9	10	10	12	11	7	13	11	18	19
	Males	89	12	6	5	5	6	10	7	3	7	3	12	13
	Females	63	6	8	4	5	4	2	4	4	6	8	6	6
85.	Total	91	9	9	4	10	7	7	4	7	9	11	6	8
	Males	47	3	5	2	3	5	5	2	3	4	6	5	4
	Females	44	6	4	2	7	2	2	2	4	5	5	1	4
86.	Total	64	7	6	9	..	1	5	5	4	4	8	6	9
	Males	31	3	6	3	..	1	2	2	3	1	2	4	4
	Females	33	4	..	6	..	..	3	3	1	3	6	2	5
87.	Total	81	7	4	8	8	10	5	6	6	4	11	6	6
	Males	44	4	3	4	2	4	3	4	3	2	9	4	2
	Females	37	3	1	4	6	6	2	2	3	2	2	2	4
88.	Total	54	4	4	5	4	5	4	3	8	5	2	5	5
	Males	31	1	1	4	3	3	4	2	5	2	1	3	2
	Females	23	3	3	1	1	2	..	1	3	3	1	2	3
89.	Total	49	4	5	4	7	1	3	7	..	5	6	3	4
	Males	30	2	1	1	4	1	3	7	..	2	4	2	3
	Females	19	2	4	3	3	..	..	..	..	3	2	1	1
90.	Total	38	5	7	3	3	..	1	2	3	5	2	3	4
	Males	19	3	3	2	2	..	..	1	2	1	..	2	3
	Females	19	2	4	1	1	..	1	1	1	4	2	1	1

Table 78.—CONCLUDED.—Deaths by ages, sex and months.

Ages in years.	Sex.	Year, 1894.	Months, 1894.											
			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
91.....	Total.....	23	5	6	1	3	1	1	2	1	2	1	1	1
	Males.....	12	1	4	1	1	1	1	2	1	1	1	1	1
	Females.....	11	4	2		2				1	2			
92.....	Total.....	24	6	5		1	3	1	3		2	2		1
	Males.....	13	2	4			3		1		1	2		
	Females.....	11	4	1		1		1	2		1			1
93.....	Total.....	19	1	5	2	1	1		1		2	2	3	
	Males.....	8		2							1	3	2	
	Females.....	11	1	3	2	1	1		1		1		1	
94.....	Total.....	25	2	1	3	4	2	1	1	1	1	3	3	3
	Males.....	11	1		2	2	2	1		1	1	1	1	2
	Females.....	14	1	1	1	2	2		1			2	2	1
95.....	Total.....	11				2	2	1		1		2	2	1
	Males.....	4				1	2							1
	Females.....	7				1		1		1		2	2	
96.....	Total.....	8	1			1			1	2	2			1
	Males.....	6	1			1				1	2			1
	Females.....	2							1	1				
97.....	Total.....	6	1	1	1		1	1						1
	Males.....	5	1	1	1		1	1						
	Females.....	1												1
98.....	Total.....	4				1	1						1	1
	Males.....	2					1						1	
	Females.....	2				1								1
99.....	Total.....	3			2	1								
	Males.....	2			1	1								
	Females.....	1			1									
100 & over..	Total.....	7	2	1			1		1	1		1		
	Males.....	3	1				1			1				
	Females.....	4	1	1					1			1		
Unknown..	Total.....	277	18	24	15	25	32	24	20	23	19	26	18	26
	Males.....	159	7	12	6	15	18	13	14	12	13	13	11	22
	Females.....	116	11	12	9	10	14	11	6	10	6	13	7	4
	Unknown..	2								1				1

COLOR OF DECEDENTS, BY COUNTIES, 1894.

Table 79 presents a detailed statement, by sex and by counties, of the deaths that occurred in 1894 of each color and race. Of the total number of decedents, 20,959, no less than 20,596, or 98.26 per cent, were white; 198, or .94 per cent, black; 53, or .25 per cent, mulatto; and 98, or .47 per cent, Indian. There were also 14 deaths, or .06 per cent of the total number in which the color was unspecified. As with births and marriages, the number and ratio of colored deaths is so small, and fluctuates so widely in different years from accidental causes, that minute comparison of the death-rates of the different colors and races for any single year is not advisable. In Table 11, Part I, the number of inhabitants of each color and race is given for the State as determined by the last State census, and the numbers of marriages, persons married, births and deaths are also exhibited there in convenient form for comparison.

Table 79.—*Exhibiting, by sex, for the State and counties, the color of decedents, as returned for the year 1894. (Still-births included.)*

State and counties.	All colors, 1894.				White.				Black.			Mulatto.			Indian.			Unknown.			
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Unknown.
State.....	20,959	11,159	9,744	56	20,596	10,972	9,581	43	198	106	92	53	25	28	98	55	43	14	1		13
Alcona.....	32	19	13		32	19	13														
Alger.....	13	7	6		13	7	6														
Allegan.....	367	200	167		355	193	162		4	2	2	5	2	3	2	2		1	1		
Alpena.....	141	86	55		141	86	55														
Antrim.....	86	42	44		85	41	44								1	1					
Arenac.....	51	22	28	1	51	22	28	1													
Baraga.....	35	17	18		30	13	17								5	4	1				
Barry.....	177	86	91		176	86	90					1		1							
Bay.....	506	270	234	2	504	270	234											2			2
Benzie.....	67	41	26		66	41	25		1		1										
Berrien.....	396	206	190		381	199	182		8	3	5	7	4	3							
Branch.....	302	143	159		301	143	158		1		1										
Calhoun.....	398	203	189	6	387	199	182	6	5	2	3	1		1	5	2	3				
Cass.....	175	94	81		158	86	72		5	2	3	11	6	5	1		1				
Charlevoix.....	83	42	41		79	42	37		5	2	3	1		1	3		3				
Cheboygan.....	137	70	67		137	70	67														
Chippewa.....	96	54	38	4	87	52	35								5	†	3	4			4
Clare.....	36	15	21		36	15	21														
Clinton.....	193	97	96		192	96	96					1	1								
Crawford.....	34	21	13		34	21	13														
Delta.....	128	74	54		126	73	53								2	1	1				
Dickinson.....	170	105	65		169	105	64								1		1				
Eaton.....	303	154	149		302	153	149		1	*	1										
Emmet.....	81	36	45		56	26	30								25	10	15				
Genesee.....	366	194	172		361	190	171		4	4		1		1							
Gladwin.....	13	9	4		13	9	4														
Gogebic.....	155	73	82		155	73	82														
G'd Traverse.....	237	151	86		235	150	85		1	1		1		1							
Gratiot.....	179	78	101		179	78	101														
Hillsdale.....	242	120	120	2	242	120	120	2													
Houghton.....	527	283	235	9	527	283	235	9													
Huron.....	252	138	114		252	138	114														
Ingham.....	471	222	248	1	458	214	243	1	12	*	8	4	1		1						
Ionia.....	274	134	139	1	273	133	139	1				1	1								
Iosco.....	99	55	43	1	99	55	43	1													
Iron.....	37	19	18		37	19	18														
Isabella.....	166	98	68		153	90	63		3	1	2	1	1		9	6	3				
Jackson.....	467	250	217		461	249	212		6	1	5										
Kalamazoo.....	445	237	207	1	434	230	203	1	8	6	2	3	1	2							
Kalkaska.....	39	21	18		39	21	18														
Kent.....	1,183	617	564	2	1,166	609	555	2	16	*	8	8	1		1						
Keweenaw.....	19	11	8		19	11	8														
Lake.....	57	30	27		57	30	27														
Lapeer.....	202	109	93		202	109	93														
Leelanau.....	94	54	40		81	44	37								13	10	3				
Lenawee.....	428	213	215		414	207	207		14	6	8										
Livingston.....	175	99	76		175	99	76														
Luce.....	17	12	4	1	16	11	4	1				1	1								
Mackinac.....	58	27	31		57	26	31								1	†					
Macomb.....	291	165	126		291	165	126														
Manistee.....	246	144	102		245	144	101		1		1										
Manitou.....	18	14	4		18	14	4														
Marquette.....	356	211	145		353	210	143								3	1	†				
Mason.....	180	90	90		175	89	86		1	*	1										
Mecosta.....	187	105	79	2	181	103	76	2	6	3	3										

* 1 returned as "colored."

† 1 returned as "halfbreed."

Table 79.—CONCLUDED.—Deaths by counties, sex and color.

Counties.	All colors, 1894.				White.				Black.			Mulatto.			Indian.			Unknown.		
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
Menominee.....	290	165	122	3	287	165	122	—	—	—	—	—	—	—	—	—	—	3	—	3
Midland.....	113	63	50	—	113	63	50	—	—	—	—	—	—	—	—	—	—	—	—	—
Missaukee.....	51	26	22	3	49	24	22	3	—	—	—	—	—	—	2	2	—	—	—	—
Monroe.....	355	168	187	—	354	167	187	—	1	1	—	—	—	—	—	—	—	—	—	—
Montcalm.....	250	122	127	1	249	121	127	1	1	1	—	—	—	—	—	—	—	—	—	—
Montmorency.....	13	6	7	—	13	6	7	—	—	—	—	—	—	—	—	—	—	—	—	—
Muskegon.....	344	195	148	1	344	195	148	1	—	—	—	—	—	—	—	—	—	—	—	—
Newaygo.....	108	55	48	—	103	55	48	—	—	—	—	—	—	—	—	—	—	—	—	—
Oakland.....	422	224	198	—	418	223	195	—	3	—	3	1	1	—	—	—	—	—	—	—
Oceana.....	129	81	48	—	127	81	46	—	—	—	—	—	—	—	2	2	—	—	—	—
Ogemaw.....	13	7	6	—	13	7	6	—	—	—	—	—	—	—	—	—	—	—	—	—
Ontonagon.....	48	31	18	1	46	30	16	—	—	—	—	—	—	—	1	1	—	1	—	1
Oscoda.....	153	77	76	—	153	77	76	—	—	—	—	—	—	—	—	—	—	—	—	—
Oscoda.....	3	1	2	—	3	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—
Otsego.....	35	17	18	—	35	17	18	—	—	—	—	—	—	—	—	—	—	—	—	—
Ottawa.....	358	178	180	—	356	177	179	—	2	1	1	—	—	—	—	—	—	—	—	—
Presque Isle.....	47	30	17	—	47	30	17	—	—	—	—	—	—	—	—	—	—	—	—	—
Rosecommon.....	2	2	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saginaw.....	919	475	440	4	909	468	487	4	3*	2*	1	3	2	1	4	3	1	—	—	—
Sanilac.....	274	157	117	—	274	157	117	—	—	—	—	—	—	—	—	—	—	—	—	—
Schoolcraft.....	91	63	27	1	89	61	27	1	—	—	—	—	—	—	2	2	—	—	—	—
Shiawassee.....	250	121	129	—	249	121	128	—	—	—	—	1	—	—	—	—	—	—	—	—
St. Clair.....	498	276	217	—	493	276	217	—	—	—	—	—	—	—	—	—	—	—	—	—
St. Joseph.....	244	120	124	—	243	120	123	—	1	—	—	—	—	—	—	—	—	—	—	—
Tuscola.....	192	105	87	—	192	105	87	—	—	—	—	—	—	—	—	—	—	—	—	—
Van Buren.....	326	177	149	—	324	177	147	—	—	—	—	2	—	2	—	—	—	—	—	—
Washtenaw.....	394	206	185	3	379	200	178	1	11	5	6	2	1	1	—	—	—	2	—	2
Wayne.....	3,443	1,839	1,578	6	3,349	1,801	1,543	5	79	47	32	7	4	3	7	7	—	1	—	1
Wexford.....	117	64	53	—	117	64	53	—	—	—	—	—	—	—	—	—	—	—	—	—

* 1 returned as "colored."

NATIVITY AND NATIONALITY OF DECEDENTS, BY COUNTIES, 1894.

In Table 80 the general nativity of decedents of each sex, classed as native-born and foreign-born, may be seen for the year 1894, and in Table 81 the nationalities of the foreign-born decedents are separately specified. The data in these tables may be compared with the corresponding population of each general nativity and nationality as given in Table 18, Part I. The value of the data relative to nativity and nationality of decedents would be much enhanced if the registration law provided for a statement of the birthplaces of the parents of each person whose death is reported. As it is, we cannot distinguish the differences in mortality, if any, characteristic of the children of foreign parents of various nationalities, and contrast them with the death-rates of the children of natives.

Table 80.—*Exhibiting by sex, for the State and counties, the nativity of decedents returned for the year 1894. (Still-births included.)*

State and counties.	All nativities, 1894.				Native-born.				Foreign-born.			Unknown.			
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Total.	Males.	Females.	Unknown.
State.....	20,959	11,159	9,744	56	15,718	8,154	7,509	55	4,542	2,589	1,953	699	416	232	1
Alcona.....	32	19	13	---	20	15	5	---	12	4	8	---	---	---	---
Alger.....	13	7	6	---	9	3	6	---	4	---	---	---	---	---	---
Allegan.....	367	200	167	---	307	166	141	---	55	32	23	5	2	3	---
Alpena.....	141	86	55	---	98	63	30	---	46	23	23	2	---	2	---
Antrim.....	86	42	44	---	62	30	32	---	22	12	10	2	---	2	---
Arenac.....	51	22	28	1	41	18	22	1	8	4	4	2	---	2	---
Baraga.....	35	17	18	---	27	14	13	---	8	3	5	---	---	---	---
Barry.....	177	86	91	---	153	75	78	---	21	11	10	3	---	3	---
Bay.....	506	270	234	2	362	188	172	2	142	80	62	2	2	---	---
Benzie.....	67	41	26	---	55	34	21	---	8	5	3	4	2	2	---
Berrien.....	396	209	190	---	317	166	151	---	49	26	23	30	14	16	---
Branch.....	302	143	159	---	289	127	142	---	26	13	13	7	3	4	---
Calhoun.....	398	208	189	6	330	154	170	6	54	38	16	14	11	3	---
Cass.....	175	94	81	---	156	83	73	---	13	8	5	3	3	3	---
Charlevoix.....	83	42	41	---	62	31	31	---	19	10	9	2	1	1	---
Cheboygan.....	187	70	67	---	105	49	56	---	30	20	10	2	1	1	---
Chippewa.....	96	54	38	4	69	36	30	4	23	15	8	4	4	---	---
Clare.....	36	15	21	---	26	9	17	---	6	3	3	4	3	1	---
Clinton.....	193	97	96	---	149	72	77	---	37	22	15	7	3	4	---
Crawford.....	34	21	13	---	26	15	11	---	6	4	2	2	2	---	---
Delta.....	128	74	54	---	87	46	41	---	39	27	12	2	1	1	---
Dickinson.....	170	105	65	---	124	77	47	---	46	28	18	---	---	---	---
Eaton.....	303	154	149	---	289	132	137	---	28	19	9	6	3	3	---
Emmet.....	81	36	45	---	73	33	40	---	5	---	5	3	3	---	---
Genesee.....	306	194	172	---	293	156	137	---	62	30	32	11	8	3	---
Gladwin.....	13	9	4	---	10	7	3	---	3	2	1	---	---	---	---
Gogebic.....	155	78	82	---	114	52	62	---	39	20	19	2	1	1	---
Gd. Traverse.....	237	151	86	---	162	104	58	---	60	41	19	15	6	9	---
Gratiot.....	179	78	101	---	155	63	92	---	23	15	8	---	---	---	---
Hillsdale.....	242	120	120	2	203	98	103	2	27	15	12	12	7	5	---
Houghton.....	527	283	235	9	406	219	178	9	104	58	46	17	6	11	---
Huron.....	252	138	114	---	171	98	73	---	80	39	41	1	1	---	---
Ingham.....	471	222	248	1	391	181	209	1	64	34	30	16	7	9	---
Ionia.....	274	134	139	1	218	108	109	1	39	16	23	17	10	7	---
Iosco.....	99	55	43	1	73	41	31	1	22	10	12	4	4	---	---
Iron.....	37	19	18	---	28	14	14	---	9	5	4	---	---	---	---
Isabella.....	166	98	68	---	138	80	58	---	28	18	10	---	---	---	---
Jackson.....	467	250	217	---	372	197	175	---	79	46	33	16	7	9	---
Kalamazoo.....	445	237	207	1	348	179	168	1	86	52	34	11	6	5	---
Kalkaska.....	39	21	18	---	33	17	16	---	5	4	1	1	---	1	---
Kent.....	1,183	617	564	2	839	421	416	2	268	141	127	76	55	21	---
Keweenaw.....	19	11	8	---	14	8	6	---	5	3	2	---	---	---	---
Lake.....	57	30	27	---	46	25	21	---	11	5	6	---	---	---	---
Lapeer.....	202	109	93	---	150	80	70	---	49	27	22	3	2	1	---
Leelanau.....	94	54	40	---	70	43	27	---	22	11	11	2	---	2	---
Lenawee.....	428	213	215	---	354	180	174	---	54	24	30	20	9	11	---
Livingston.....	175	99	76	---	141	74	67	---	25	20	5	9	5	4	---
Luce.....	17	12	4	1	11	8	2	1	6	4	2	---	---	---	---
Mackinac.....	58	27	31	---	46	21	25	---	11	5	6	1	1	---	---
Macomb.....	291	165	126	---	209	114	95	---	82	51	31	---	---	---	---
Manistee.....	246	144	102	---	176	102	74	---	68	40	28	2	2	---	---
Manitou.....	18	14	4	---	13	10	3	---	4	---	---	1	---	1	---
Marquette.....	366	211	145	---	230	129	101	---	118	74	44	8	8	---	---
Mason.....	180	90	90	---	132	62	70	---	47	27	20	1	1	---	---
Meosota.....	187	106	79	2	142	74	66	2	31	22	9	14	10	4	---

Table 80.—CONCLUDED.—Deaths by counties, sex and nativity.

Counties.	All nativities, 1894.				Native-born.				Foreign-born.			Unknown.			
	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Unknown.	Total.	Males.	Females.	Total.	Males.	Females.	Unknown.
Menominee.....	290	165	122	3	209	106	100	3	63	45	18	18	14	4	.....
Midland.....	113	63	50	.....	88	49	39	.....	23	13	10	2	1	1	.....
Missaukee.....	51	26	22	3	37	19	15	3	14	7	7	.....	.....	.....	.....
Monroe.....	355	168	187	.....	279	127	152	.....	72	39	33	4	2	2	.....
Montcalm.....	250	122	127	1	216	104	111	1	29	15	14	5	3	2	.....
Montmorency.....	13	6	7	.....	10	3	7	.....	1	1	.....	2	2	.....	.....
Muskegon.....	344	195	148	1	241	136	104	1	95	53	42	8	6	2	.....
Newaygo.....	108	55	48	.....	87	45	42	.....	16	10	6	.....	.....	.....	.....
Oakland.....	422	224	198	.....	323	169	154	.....	85	48	37	14	7	7	.....
Oceana.....	129	81	48	.....	106	67	39	.....	15	12	3	8	2	6	.....
Ogemaw.....	13	7	6	.....	10	5	5	.....	3	2	1	.....	.....	.....	.....
Ontonagon.....	48	31	16	1	26	17	8	1	15	9	6	7	5	2	.....
Osceola.....	153	77	76	.....	114	53	61	.....	35	21	14	4	3	1	.....
Osoda.....	8	1	2	.....	2	1	1	.....	1	1	.....	.....	.....	.....	.....
Oshtemo.....	35	17	18	.....	31	16	15	.....	3	1	2	1	.....	1	.....
Ottawa.....	358	178	180	.....	240	113	127	.....	116	63	53	2	2	.....	.....
Presque Isle.....	47	30	17	.....	32	20	12	.....	12	8	4	3	2	1	.....
Roscommon.....	2	2	.....	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....
Saginaw.....	919	475	440	4	634	323	307	4	256	135	121	29	17	12	.....
Sanilac.....	274	157	117	.....	156	91	65	.....	115	64	51	3	2	1	.....
Schoolcraft.....	91	63	27	1	57	40	17	.....	20	16	4	14	7	6	1
Shiawassee.....	250	121	129	.....	203	90	113	.....	34	22	12	13	9	4	.....
St. Clair.....	493	276	217	.....	326	172	154	.....	160	100	60	7	4	3	.....
St. Joseph.....	244	120	124	.....	192	97	95	.....	34	16	18	18	7	11	.....
Tuscola.....	192	105	87	.....	135	66	69	.....	48	30	18	9	9	.....	.....
Van Buren.....	326	177	149	.....	290	157	133	.....	28	14	14	8	6	2	.....
Washtenaw.....	894	206	185	3	292	150	139	3	81	41	40	21	15	6	.....
Wayne.....	3,443	1,859	1,578	6	2,402	1,262	1,134	6	914	521	393	127	76	51	.....
Wexford.....	117	64	53	.....	100	55	45	.....	15	8	7	2	1	1	.....

TOWNSHIPS REPORTING NO DEATHS, AND DELINQUENT TOWNSHIPS.

There were 69 townships and wards, having an aggregate population of 15,807 persons in 1894, in which no deaths occurred in 1894, according to the statements of their supervisors. The supervisors of 34 townships, representing a total population of 19,718 persons in 1894, failed entirely to make reports of deaths, as required by law.

In this matter—the securing of full and prompt returns—the State Department has received valuable assistance from many county clerks, which is hereby gratefully acknowledged, while, on the contrary, a few county clerks, by negligent and tardy returns from their offices, and by failing to promptly notify the State Department of cases of delinquency in time for early action, have materially hindered the work of obtaining a full registration. The supervisors' returns are required by law to reach the county clerks by June 1, but are not due at the Department until September 1. Could we know of a delinquency as soon as it occurred, or as early as the county clerk should be aware of it, it would be an easy matter in many cases to call the supervisor's attention to his neglect of duty, and to secure a proper return from him. When, however, the county clerk makes no reply to the circular letter requesting a report of delinquent townships (which is sent early in June), and when his transcript, due September 1, does not reach the State Department until several months later, it is evident that by the time (1) it is ascertained by correspondence with the

county clerk whether the supervisor of the missing township has made no return or reported "no deaths;" (2) the supervisor himself has been notified and requested to perform his duty; and, lastly, (3) in case of persistent refusal, the prosecuting attorney has been requested to enforce the law, that much valuable time has been wasted, and the chances of obtaining accurate returns, or even of obtaining any returns, in some cases, have greatly diminished. Thus the unsatisfactory condition of the returns from Ogemaw county for the present year is due chiefly to negligence on the part of the county clerk. Seven townships in this small county, representing a population of 3,568 persons out of a total population of 5,636 inhabitants of the entire county, remain unreported. In spite of repeated requests no information or returns could be had from the clerk until it was too late to obtain reports from the delinquent supervisors in time for the present compilation. Such gross neglect of duty works a double wrong, vitiating the vital statistics of the State, and, perhaps, causing large personal loss to some citizen of the county whose officials failed in their public duty in making proper record of a birth or death.

The belief has been stated in previous reports that many townships among those reporting "no deaths," are so placed by the negligence of their supervisors, who find it easier to make such a return than to take the trouble to perform their duty as required by law. Such misstatements were easily revealed in the returns for 1893, and are clearly apparent in those for 1894, by comparing the deaths reported by the supervisors with the deaths reported from the same townships for that part of the year covered by the State census of 1894. The census enumerators collected the deaths that had occurred during the year extending from June, 1893, to May, 1894, inclusive. Thus five months of the registration year 1894 may be checked by examination of the census returns. In the foot-notes to Table 82 certain townships thus proved to have made incorrect statements are indicated; most important of these is the township of Hagar, Berrien county, whose supervisor stated that no deaths occurred during the year 1894. The State census showed that no less than seven deaths were reported from this township for the first five months of the year, which is not an excessive number, the population being 999. A letter of personal inquiry addressed to the supervisor of this township met with no response.

PROCESS OF OBTAINING DELINQUENT RETURNS.

Proper blanks for the enumeration of births and deaths are prepared and shipped to the county clerks throughout the State on or near March 20 of each year. The number sent to each county is based upon an estimate previously obtained from each county clerk of the number necessary for distribution, such estimate being carefully checked in this Department and compared with the numbers supplied for previous years, population, number of births and deaths returned, number of supervisors, and number of blanks on hand in county clerk's office, so that an ample supply of blanks for all necessary requirements can be sent without waste. With the blanks are sent full instructions* to the county clerks and supervisors for making returns, information to the supervisors as to duties under the law, and, in general, every suggestion that seems likely to facilitate the work of enumeration and cause full and reliable returns to be made. Every supervisor is especially requested to make his returns to the county clerk at the time prescribed by law (on or before June 1) *whether any births or deaths have occurred in his township or not*, in order that it may be known that the enumeration has been duly made in the latter case.

[Subject continued on page 233.]

* See Appendix to Report for 1892.

Table 81.—CONCLUDED.—Nationalities of

Counties.	Total deaths, 1894.	Sex.	Total foreign-born decedents, 1894.	Nationality of foreign-					
				Canada.	England and Wales.	Scot- land.	Ire- land.	Ger- many.	Austria.
Presque Isle..	47	Total	12	2	1			9	
		Males	8	2				6	
		Females	4		1			3	
Roscommon ..	2	Total	1	1					
		Males	1	1					
		Females							
Saginaw	919	Total	256	78	21	8	30	109	1
		Males	136	39	13	6	17	55	
		Females	121	39	8	2	13	54	1
Sanilac	274	Total	115	59	16	8	16	14	
		Males	64	31	8	5	11	7	
		Females	51	28	8	3	5	7	
Schoolcraft....	91	Total	20	4		1	3	2	1
		Males	16	3		1	2	1	1
		Females	4	1			1	1	
Shiawassee....	250	Total	34	6	6	3	8	9	
		Males	22	4	5	1	5	5	
		Females	12	2	1	2	3	4	
St. Clair	493	Total	160	77	16	10	22	32	1
		Males	100	48	8	6	16	20	
		Females	60	29	8	4	6	12	1
St. Joseph	244	Total	34	2	5		5	22	
		Males	16	1	4		1	10	
		Females	18	1	1		4	12	
Tuscola	192	Total	48	29	4	3	2	10	
		Males	30	19	2	1	1	7	
		Females	18	10	2	2	1	3	
Van Buren	326	Total	28	10	4		6	5	
		Males	14	4	2		3	4	
		Females	14	6	2		3	1	
Washtenaw....	394	Total	81	10	9	1	9	49	
		Males	41	4	6		6	23	
		Females	40	6	3	1	3	26	
Wayne	3,443	Total	914	187	82	44	148	387	1
		Males	521	94	55	28	81	219	
		Females	393	93	27	16	67	168	1
Wexford	117	Total	15	7		1			
		Males	8	3					
		Females	7	4		1			

foreign-born decedents in Michigan, 1894.

born decedents, 1894.

Hol- land.	Bel- gium.	Switz- erland.	Nor- way.	Swe- den.	Den- mark.	Rus- sia, (Fin- land).	Bohe- mia.	Po- land.	France.	Italy.	All others.
		1	1				1	4	1	1	
		1	1				1	2	1	1	
								1	1		
								1	1		
			1	4		4					
			1	4		4					
									2		
									2		
	1										1
	1										1
3											
1											
2											
		2						1			
		2						1			
	9	5	2	1		4	2	23	15	3	1
	7	3	1			3	1	14	12	3	
	2	2	1	1		1	1	9	3		1
				6							
				4	1						
				2	1						

[Subject continued from page 227.]

In order that returns may be made as expeditiously as possible, and thus the work of compilation be forwarded, a special circular is sent to each county clerk:

MICHIGAN,
DEPARTMENT OF STATE,
Lansing, June 10, 1895.

Clerk of County:

DEAR SIR—In order that the Annual Registration Report shall be issued promptly, it is necessary that each step of the process of collection of data, making the records and transcripts by the county clerks, and the return of the latter to this Department, shall be performed without undue delay.

The returns of the births and deaths collected by the supervisors in your county for the year 1894, should have been received by you on or before June 1, 1895, as prescribed by the law. Are such returns all in at present? If not, kindly inform this Department on the subjoined blank, giving the names of delinquent townships, names and postoffice addresses of their supervisors, and whether no returns of births, of deaths, or of both births and deaths have been filed. Also please give the names of townships whose supervisors reported that an enumeration had been made, and that no births or deaths had occurred during the year 1894.

A notification will be immediately sent to all supervisors thus reported as not having performed their duties, as required by law, urging them to comply at once therewith, and acquainting them with the penalties incurred by neglect. It is also requested that county clerks employ all proper means to obtain these delinquent returns as early as possible. Efforts should also be made, whenever practicable, to obtain a full and correct return of the data required, instead of the incomplete and perfunctory enumeration too often made.

It is requested that this Department be notified at once of the receipt of returns from any township that has been reported delinquent, in order that any proceedings instituted to obtain such returns may be discontinued.

While every effort should be made by county clerks to complete the returns from their counties, as requested above, no delay should be caused, on account of delinquent townships, in sending in the transcripts. These are due at this Department on or before September 1, and under no circumstances should they be delayed after this date. In fact, it will be perfectly practicable in many cases to make such returns from 30 to 60 days earlier than the time set by law. Such early transmittal, when possible, will be greatly appreciated by this Department, as it hastens the work of compilation.

All returns are receipted for immediately upon their arrival at this office. Should the receipt not be returned within a reasonable time, inquiry should be made as to whether the returns have gone astray. Letters asking for corrections will be sent as soon after the receipt of the returns as their examination will allow; prompt replies to these are earnestly requested from all county clerks.

Very respectfully,

WASHINGTON GARDNER,
Secretary of State.

Report of Delinquent Townships, County of, 1894.

The supervisors of the following townships have failed to file returns of the birth, deaths, or both births and deaths, as stated below, that occurred in their respective townships during the year 1894, in my office as required by law, and have not reported that none occurred during that time.

Township.	Name of supervisor.	Postoffice address.	State whether no returns of births, deaths, or both have been filed.

There were NO BIRTHS during the year 1894 in the townships of
.....; and NO DEATHS in the townships of
as stated by their supervisors after making the enumeration as required by law.

Dated.....1895.

County Clerk.

A prompt return of the supervisors who have failed to perform their duty within the limits of the time prescribed by the law, enables this Department to call their attention to the matter immediately, within thirty days in many instances, after the expiration of the legal time of return, and while the missing records of births and deaths can be obtained with little loss. The letter of notification is as follows:

MICHIGAN,
DEPARTMENT OF STATE. }

LANSING, 1895

Mr.

Supervisor of Township, County,
....., Michigan.

DEAR SIR:—

We have been informed by the Clerk of your County that you have made no returns of from your township for the year 1894. Did you make the enumeration as required by law? If so, did you ascertain that none occurred, or did you fail to report the same to the County Clerk?

Please inform us promptly in regard to this matter, and in case you have any births or deaths yet to report to the County Clerk, do so at once, as our work is delayed by the non-arrival of the same. The law requires all supervisors' returns of births and deaths to be filed with the County Clerk by June 1, and failure to do so can only be satisfactorily amended by IMMEDIATELY collecting and returning the data required. Should compliance with the law be further neglected, it will become our duty to notify the Prosecuting Attorney of your county, and request him to proceed under the penalty clause of the registration act (§ 866, Howell's Annotated Statutes) in order to obtain the delinquent returns. This, we trust, you will not force us to do, but will avoid trouble and aid us in the important work of registration by making your returns as required by law.

A supply of blanks and instructions may be obtained, if you have not already received them, from your County Clerk, to whom your returns should be sent, when completed. Kindly notify this Department, if convenient, when you do so, and greatly oblige.

Yours very respectfully,

WASHINGTON GARDNER,
Secretary of State.

THE PENALTY FOR REFUSAL OR NEGLECT TO RETURN BIRTHS AND DEATHS.—In case of the refusal or neglect by any of the officers mentioned in this act, to perform any of the duties hereinbefore required of them or either of them, to be done and performed by any of the provisions herein contained, such officer shall be liable to a fine not to exceed one hundred dollars, and the costs of prosecution; and the prosecuting attorney in each county is hereby required to prosecute, in the name of the people of the State of Michigan, all persons in his county who shall willfully violate any of the provisions of this act; and the said supervisor or assessor of any township, city, or any ward therein, may be prosecuted for a misdemeanor under this section, and upon conviction, punished as therein provided for.—*Howell's Annotated Statutes, § 866.*

In very many cases, we are happy to say, this request brings an immediate response, and the returns of births and deaths soon reach this Department from the delinquent townships. This procedure has a happy effect also in hastening the arrival of the returns from the counties, some of which were accustomed to delay them for several months beyond the period allowed by law, and thus the early issue of the Registration Report is made practicable. When, as occurred in some instances, no replies were received to such requests, and the county clerks reported that the returns had not been made in compliance therewith, notices of the delinquencies were sent to the prosecuting attorneys, and their assistance enlisted to secure the delinquent returns,—if necessary, by prosecution under section 866, Howell's statutes. In most cases the supervisors hastened to comply with the law when their attention was called to the penalty attached to their neglect of duty.

Table 82.—List of townships in which it was reported that no deaths occurred in 1894, showing population in 1894.

County.	Township.	Popula- tion, June 1, 1894.	County.	Township.	Popula- tion, June 1, 1894.
Alcona	{ Millen	118	Kalkaska	{ Garfield	165
	{ Mitchell	88		{ Glade	122
Alger	Mathias	212	Keweenaw	{ Grant	139
Arenac	Turner	31		{ Houghton	270
Baraga	Covington	88	Luce	Pentland	188
Bay	Garfield	302	Mackinac	Hendricks	204
Benzie	Lake	171	Manistee	Maple Grove †	423
Berrien	Hagar*	999	Manitou	{ North Manitou	98
				{ South Manitou	79
Charlevoix	{ Boyne Valley	735	Marquette	{ Forsyth †	442
	{ Hudson	128		{ Humboldt §	263
	{ Springvale	192		{ Turin	143
Cheboygan	{ Ellis	163	Menominee	Holmes	414
	{ Forest	154	Midland	Greendale	167
	{ Waverly	110	Missaukee	Caldwell	585
	{ Wilmot	107			
Chippewa	Trout Lake	89	Montmorency	{ Montmorency	265
				{ Rust	291
Clare	{ Hamilton	343		{ Wheatfield	130
	{ Hatton	421	Newaygo	{ Goodwell	392
	{ Hayes	171		{ Troy	277
	{ Redding	326	Ogemaw	Foster	136
Crawford	{ Ball	120			
	{ Center Plains	152	Oscoda	{ Atherton	69
	{ Grove	95		{ Big Creek	180
Emmet	{ Bliss	239		{ Comins || .....	410
	{ Egleston	140		{ Elmer || .....	351
				{ Mount Pindus	85
Gladwin	{ Buckeye	254	Presque Isle	Bismarck	134
	{ Butman	203			
	{ Clement	91	Roscommon	{ Denton	65
	{ Gladwin City:			{ Nester	211
	1st ward	263		{ St. Helens	297
	3d ward	144			
	4th ward	182	Wexford	{ Hanover	347
Huron	Gore	299		{ Slagle	157
				{ South Branch	247
Iosco	{ Au Sable	174			
	{ Grant	190			
	{ Plainfield	242			
	{ Wilber	323			
Total population reporting no deaths					15,807

* There were 7 deaths reported by the census for the months January-May, 1894.

† 1 death reported by the census, January-May, 1894.

‡ 2 deaths by census, January-May, 1894.

§ 5 deaths by census, January-May, 1894.

|| 2 deaths by census, January-May, 1894.

The above particulars in regard to the process of obtaining delinquent returns have been given somewhat fully, on account of the importance of the subject. While an unpleasant duty, nevertheless the prosecution of such cases until satisfactory or apparently satisfactory results are obtained is one that cannot be neglected by the central office, except at the risk of greatly increasing the proportion of defective returns. It is true that it cannot always be known by this Department whether a correct enumeration has finally been taken or not in response to the solicitations of the Department. In too many cases the final report is only perfunctory, and has not been based upon a careful enumeration as contemplated by the law. Very little can be done in such cases where the forms of the law, including the making of the certified report, have been duly complied with. Many townships of large population yearly report an absurdly small number of births and deaths, but the fact that some have been reported and that the enumeration has evidently been made, precludes further inquiry. No complete and accurate records of births and deaths will ever be obtained until provision is made for their immediate registration soon after the time of occurrence; in the meantime, while charged with the execution of the old and imperfect registration law, every effort should be made to enforce it as thoroughly as possible, remembering that the record of even a single birth or death, while of little statistical weight, may be of the greatest personal interest and legal importance to some inhabitant of the State whose interest in this respect the State assumed the guardianship of when the registration law was established.

Table 83.—*List of townships from which no returns of deaths were received for 1894, showing population in 1894. (List closed December 1, 1894.)*

County.	Township.	Popula- tion, June 1, 1894.	County.	Township.	Popula- tion, June 1, 1894.
Alger.....	Munising*.....	367	Marquette.....	Sands*.....	248
Chippewa.....	{ Bruce*.....	962	Missaukee.....	{ Bloomfield*.....	154
	{ Drummond*.....	408		{ Norwich*.....	325
	{ Raber*.....	453			
Delta.....	Fairbanks*.....	312		{ Beaver Lake.....	97
Gladwin.....	{ Bentley*.....	268	Ogemaw§.....	{ Churchill.....	426
	{ Gladwin*.....	711		{ Goodar.....	172
	{ Tobacco.....	441		{ Horton.....	282
	{ Gladwin City: 2d ward*.....	293		{ Ogemaw.....	162
				{ Richland.....	623
Gogebic.....	Ironwood.....	238		{ West Branch.....	1,806
Grand Traverse.....	{ East Bay.....	485	Ontonagon.....	{ Interior*.....	1,623
	{ Union.....	193		{ McMillan*.....	1,782
Huron.....	Humet.....	800	Oscoda.....	Mentor.....	449
Iosco.....	Burleigh.....	566	Roscommon.....	{ Higgins.....	716
Kent.....	Courtland.....	1,391		{ Markey.....	39
Lake.....	Yates.....	206		{ Richfield.....	79
			Schoolcraft.....	Harrison.....	558
			Wayne.....	Hamtramck*.....	2,075
Total population of delinquent townships.....					19,718

* Supervisor (or assessor) neglected to make returns.

† Supervisor stated that returns were made to county clerk, but they were not transmitted to this Department.

‡ There were 6 deaths returned but all for the year 1895.

§ The county clerk delayed making returns so long that the usual inquiries in regard to delinquent townships could not be made.

SECTION II.—CAUSES OF DEATH IN MICHIGAN DURING THE YEAR 1894.

The tables in this section of the report are designed to exhibit the particulars in regard to the mortality in Michigan for the year 1894 with especial reference to the individual causes of death, so far as the returns afford information on this point. It is well ascertained that not all of the deaths that annually occur in Michigan are enumerated by the supervisors. It has been estimated that should the number of deaths actually returned be increased by 60 per cent of itself, the result would probably not exceed the actual number of deaths that occur. This percentage of omissions is known to be somewhat irregularly distributed through the year, the early months most distant from the date of enumeration being the most deficient. It is evident that the individual causes of death share in this deficiency of enumeration, and, on the average, each should be increased by about the same percentage as total deaths in order to give the entire number of deaths. Certain diseases, as cholera infantum, whose incidence is mostly in the latter months of the year, are more fully returned than others, like measles or scarlet fever, which occur chiefly in the spring.

The original statements of the causes of death are made by the supervisors or assessors on the authority of the families or friends of the deceased persons, and are not based, as a rule, upon the death-certificates of the medical attendants. A very large percentage of deaths is returned with the cause of death entirely unspecified or stated to be "unknown," while many of the specified causes included in the tables are so indefinite as to afford no accurate information in regard to the diseases that caused death. Such are the deaths returned as due to "lung trouble," "brain difficulty," "kidney complaint," "heart failure" (no less than 405 of these in 1894, few of which were probably actual heart disease), "convulsions," "dropsy" of various organs, "fever" (unspecified as to its nature), "old age," "debility," etc., etc. The best that can be done with such statements is to classify such of them as admit of it under the organ affected, and to remember that the deaths reported from definitely specified causes would be increased somewhat if the nature of the disease included in these indefinite returns could be ascertained.

The present system of enumeration of deaths in Michigan not only fails to obtain a large percentage of the deaths that actually occur, and to state definitely the causes of death of a large number of those decedents that are returned, but even the definite statements made by the enumerators are open to more or less question. They have no medical knowledge, as a class, and are not able to intelligently scrutinize the statements made to them by interested parties,—the families or friends of decedents. In many cases the facts required are not definitely remembered by the family; the physician's diagnosis is misunderstood or forgotten, and a worthless or misleading statement is made. The remedy for these defects in the present registration law is a very simple one, and one that is already in practical operation in many cities of the State under local regulations,* namely, the requirement of a certificate of death from the medical attendant and the issue of a permit for burial or for the removal of the body in the case of every death that occurs in this State, city and country alike. Without such permit from the township, village or city authority empowered to issue the same, no burial or removal for burial in another State should be permitted under strict penalties.

* See Part V, Report for 1892.

The most important causes of death from a practical standpoint are those that the State Board of Health is endeavoring to restrict—the "*communicable diseases dangerous to the public health*" as defined by law. Especial prominence is given to these in the tables in this section of the report, and in the following summary the number and percentage to total deaths from all specified diseases are stated for the leading ones:

SUMMARY OF REGISTRATION OF CAUSES OF DEATH, 1894.*

Deaths from all causes,	20,959
Death-rate per 100,000 population,	935.0

In the above statement of deaths from all causes, still-births are included to the number of 1,002. Excluding these, as is customary in most mortality reports, we have:

Deaths from all causes, still-births excluded,	19,957
Death-rate per 100,000, still-births excluded,	890.8

Excluding 1,213 deaths from violence, 1,002 still-births, 81 premature births, and 1,688 deaths of which the causes were unknown or unspecified, we have:

Deaths from SPECIFIED DISEASES,	16,975
---	--------

Even this number contains many deaths the causes of which are practically unspecified, as "old age," "debility," etc., but such deaths can be certainly ascribed to disease. The total thus obtained makes a more satisfactory basis of reference for stating the proportion of deaths from any specified cause than the grand total inclusive of deaths from violence, still-births, and "unknown" causes. Thus we have:

Deaths from communicable diseases dangerous to the public health,	4,887 or 25.8 per cent.
---	-------------------------

This number includes only those at present so defined by the State Board of Health. It will probably in time include all specific infectious diseases. The principal diseases now included are:

Consumption,	2,206 or 13.0 per cent.
Diphtheria and croup,	822 or 4.8 per cent.
Typhoid fever,	586 or 3.2 per cent.
Scarlet fever,	168 or 1.0 per cent.
Whooping-cough,	158 or .9 per cent.
Measles,	84 or .5 per cent.
Small-pox,	85 or .5 per cent.

Certain other diseases and groups of diseases of special importance are:

Cancer,	677 or 4.0 per cent.
Influenza,	402 or 2.4 per cent.
Pneumonia,	1,200 or 7.1 per cent.
Lung diseases (including pneumonia and consumption),	3,896 or 23.0 per cent.
Bowel diseases,	2,060 or 12.1 per cent.
Brain diseases,	1,829 or 10.8 per cent.
Heart diseases (not including "heart failure"),	986 or 5.8 per cent.

* See summary of registration of deaths (occurrence by months, sex, age, color and nativity of decedents) on page 182.

The tables in this section are arranged to show as clearly as possible the facts concerning the causes of death *as returned*; it is impracticable to attempt to apply any graduated correction in order to bring out more clearly the relations of the mortality from various diseases to meteorological conditions in the several months, or to attempt to estimate the actual number of deaths from different diseases, the factor of correction being variable, as already stated, owing to the different distribution of different diseases through the year. All subsequent statements must be taken with some allowance, it being understood that they are true only so far as our present returns may be depended upon.

In Table 84 the relative number of deaths of each sex from the diseases included may be considered as approximately correct upon the hypothesis that the deaths returned are fairly representative of the whole number that occurred. So, also, the distribution of the deaths from each cause by periods of age of decedents, as given in this table, is probably reliable. The distribution of deaths by months is not reliable, the early months of the year being not so completely returned as the latter months. In Table 85 the relative number of deaths from each disease to total deaths from disease in each county may be accepted, with some reservations on account of more careful definition of causes of death in certain localities. The relative number of deaths and the death-rates exhibited for different diseases in Tables 86 and 87 during successive years and periods, may be supposed to be fairly comparable under the belief that the accuracy of registration has not materially altered from year to year. The method of enumeration has remained the same during the whole period of years, so that there is reason to suppose that this is the case.

Table 102, the alphabetical list of causes of death, is intended to be the last appearance of this tabular arrangement. In the older reports causes of death were arranged merely in alphabetical order, as returned, with a certain degree of consolidation, but not sufficient to assure the casual reader that the total number of deaths from any specified cause or group of causes could be learned from the data under any given title. The classification by sex for months and periods of age was entirely different from the more condensed nosological arrangement used in the table presenting the distribution of deaths by counties. No comparison of the data in these two tables could be made without great risk of error from differences of inclusion of the terms employed. In the Report for 1892 a new and uniform classification of deaths was introduced which gave the details by sex, months of death, periods of age, counties and previous years. In the new tables the statements were for persons, not for males and females separately, the exact statements by sex for each of the elements referred to being preserved in the alphabetical list as in previous years. This was done for the reason that for many purposes the differentiation by sex in all of the statistical statements is unnecessary and only complicates the subject and embarrasses the reader. In the next report it is purposed to present the details by sex in tables similar in form to Tables 84 and 85, and thus enable the old alphabetical list to be entirely dispensed with.

Synopsis of tables relating to causes of death.

Table.	Causes of death in Michigan, 1894.
<i>A.—Diseases returned as causes of death, 1894.</i>	
84.	Important diseases returned as causes of death in Michigan during the year 1894, by sex, months of death and periods of age.
85.	Important diseases returned as causes of death in Michigan during the year 1894, by counties.
86.	Important diseases returned as causes of death in Michigan for each of the years 1869-94, inclusive.
87.	Important diseases registered in Michigan during 1894, compared with 1893, and with five quinquennial periods, 1870-94; showing death-rates per 100,000 population, and proportional deaths per 1,000 deaths from specified diseases.
88.	Death-rates from certain important diseases for each of the years 1869-94. With diagram.
89.	Geographical divisions of the State used in the study of the distribution of causes of death.
90.	Deaths from "old age" and deaths of persons aged under 5 years and over 70 years, by geographical divisions, 1894.
91.	Certain important diseases returned as causes of death in 1894, by geographical divisions:—Consumption, pneumonia, influenza, diphtheria, croup, scarlet fever, typhoid fever and diarrheal diseases.
92.	Deaths and death-rates per 100,000 population, by geographical divisions, from certain important diseases in Michigan, 1894.
<i>Age and sex incidence of diphtheria and croup.</i>	
93.	Deaths returned from diphtheria, croup and membranous croup in Michigan by sex and periods of age, for each of the years 1867-94.
94.	Aggregate deaths, by sex and periods of age, for each of the consecutive quinquennial periods between 1870 and 1894, and for the entire period.
95.	Proportional deaths by sex and periods of age, death-rates and relative male mortality from diphtheria and croup for twenty-five years, 1870-94.
96.	Death-rates, by sex, and relative male mortality from diphtheria and croup for each of the years 1870-94, with quinquennial and quarter-century averages.
97.	Proportional deaths by sex and periods of age, death-rates and relative male mortality from diphtheria and croup, by quinquennial-periods, 1870-94.
<hr/>	
98.	Deaths from cancer returned for the year 1894 and for the twenty-two years, 1872-93, specifying sex and organs affected. With note on deaths from "tumor," 1894.
<i>B.—Deaths from violence, 1894.</i>	
99.	Deaths from violence in Michigan during the year 1894, classified.
100.	Deaths from violence in Michigan in 1894, by counties.
101.	Deaths and death-rates from violence in Michigan, distinguished as accidental, suicidal and homicidal, for each of the years 1870-94, inclusive; with quinquennial averages.
<hr/>	
102.	Causes of death in Michigan, 1894:— <i>Alphabetical List</i> , showing, by sex, months of death and periods of age of decedents.
<i>Occupations of decedents and causes of death, 1894.</i>	
103.	Occupations, by sex, of decedents in Michigan in 1894, showing principal causes of death and ages at death in quinquennial periods.
104.	Proportion by occupations of each sex, of decedents from certain important causes of death in Michigan, 1894. Also average ages at death of specified occupations.
105.	Death-rates per 1,000 population of same sex and occupation, 1894.

Table 84.—Important diseases and groups of diseases returned as causes of death in of decedents from

Line number.	Causes of death, 1894.	Total deaths, 1894.	Sex.			Months of death, 1894.											
			Males.	Females.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	TOTAL DEATHS.....	20,959	11,159	9,744	56	1,404	1,272	1,641	1,727	1,705	1,619	1,668	2,024	2,047	2,007	1,845	1,975
2	SPECIFIED DISEASES.....	16,975	8,746	8,228	1	1,149	1,038	1,356	1,375	1,318	1,278	1,315	1,626	1,702	1,671	1,518	1,611
3	<i>Dangerous Com-</i>	4,387	2,067	2,319	1	306	277	354	355	344	348	293	339	390	459	496	453
4	<i>municable Dis-</i>	2,206	996	1,210	..	153	146	201	207	202	192	159	185	180	184	206	189
5	<i>eases</i>	227	116	110	1	14	13	14	9	16	19	27	18	27	21	23	26
6	<i>Other tubercular</i>	92	47	45	..	7	5	8	4	4	5	14	5	8	9	11	12
7	<i>diseases</i>	41	19	22	..	2	2	3	2	5	5	5	1	8	1	4	8
8	Marasmus.....	23	10	12	1	3	1	..	2	3	2	..	3	3	3	1	2
9	Meningitis, Tuber.	57	27	30	..	2	4	1	1	4	5	7	7	7	8	6	5
10	Scrofula.....	14	13	1	..	..	1	2	..	..	2	1	2	1	..	1	4
11	Tabes mesenterica	136	67	69	..	10	12	12	10	5	4	5	11	13	16	16	22
12	Other forms of tuberculosis...	44	24	20	..	4	4	4	4	2	1	..	1	2	8	9	5
13	Croup.....	642	314	328	..	46	46	47	45	41	35	27	39	48	83	87	98
14	Croup, Membranous	43	19	24	..	5	3	5	2	2	3	2	1	2	5	8	5
15	Diphtheria.....	33	..	33	..	4	2	4	6	1	6	1	2	1	2	2	2
16	Erysipelas.....	163	76	87	..	14	17	19	12	22	16	7	6	10	8	9	23
17	Fever, Puerperal...	536	274	262	..	40	23	27	27	15	29	28	37	75	102	86	46
18	Fever, Scarlet.....	22	11	11	..	1	..	1	1	..	2	3	2	2	4	4	2
19	Fever, Typhoid.....	2	1	1	..	..	..	..	..	..	..	..	1	..	1	..	..
20	Fever, Typho-mal..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21	Fever, Typhus.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	Glanders.....	84	40	44	..	4	5	12	16	25	9	2	5	3	2	..	1
23	Measles.....	2	..	2	..	..	..	..	1	..	..	..	..	1	..	..	..
24	—(German (Rötheln)	85	55	30	..	2	1	3	..	5	17	4	4	4	10	18	17
25	Small-pox.....	4	4	..	..	1	1	..	..	..	1	..	..	..	..	1	..
26	Chicken-pox.....	158	70	88	..	8	4	5	15	8	14	18	27	12	13	17	17
27	Whooping-cough...	43	38	5	..	2	2	5	1	5	5	4	4	5	5	4	3
28	Bladder diseases.....	13	12	1	..	..	..	1	1	2	1	2	1	1	3	1	..
29	Calculus.....	25	21	4	..	2	2	4	..	2	3	2	3	2	1	1	3
30	Cystitis.....	5	5	..	..	..	..	..	..	1	1	..	..	..	1	2	..
31	Bladd-r disease, etc	2,060	1,092	968	..	51	50	74	77	87	103	245	458	470	248	101	94
32	Bowel diseases.....	396	208	188	..	17	26	32	28	29	27	28	46	57	42	36	31
33	Bowels, Inflam't'n of	234	132	102	..	3	3	2	2	8	10	47	77	53	23	3	3
34	Diarrhea.....	891	474	417	..	14	5	19	20	21	35	119	242	267	108	26	16
35	Cholera infantum...	100	57	43	..	..	2	..	..	3	2	10	33	24	22	2	2
36	Dysentery.....	102	35	67	..	6	1	3	10	7	11	7	12	13	10	6	16
37	Peritonitis.....	337	185	151	..	11	13	18	20	19	18	34	48	56	45	28	26
38	Bowel disease, etc...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

NOTE.—The arrangement of causes of death is uniform in Tables 84-87. See text following this group of tables, to which reference may be made by line numbers.

CAUSES OF DEATH BY SEX, MONTHS AND PERIODS OF AGE. 247

Michigan during the year 1894, showing sex, months of death and periods of age each cause.

Ages by years, under five.					Ages of decedents by five-year periods, 1894.																				Line number.
0 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	0 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.			
*5,183	924	418	259	236	*7,020	760	490	768	943	813	776	796	656	718	776	787	998	1,005	1,141	987	1,248	277	1		
3,061	797	363	227	216	4,664	673	418	654	813	698	655	663	565	627	695	708	918	938	1,064	914	1,155	153	2		
474	210	122	110	127	1,043	399	203	370	464	359	311	229	172	150	132	118	112	106	90	62	30	37	3		
76	18	7	4	9	114	28	42	219	333	263	238	176	141	110	104	102	88	91	67	43	24	22	4		
121	17	6	4	1	149	4	3	6	5	9	5	5	4	6	5	4	4	6	9	2	1	---	5		
86	3	1	---	---	90	---	---	---	1	---	---	---	---	---	---	---	---	---	1	---	---	---	6		
20	9	4	2	---	35	1	1	1	1	---	---	1	---	1	---	---	---	---	---	---	---	---	7		
7	1	1	1	---	10	2	---	2	---	---	---	3	1	1	---	---	---	1	3	---	---	---	8		
8	4	---	---	1	13	1	---	1	2	7	4	1	2	3	4	3	3	5	5	2	1	---	9		
---	---	---	1	---	1	---	2	2	1	2	1	---	1	1	1	1	1	---	---	---	---	---	10		
68	23	12	8	7	118	13	3	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	11		
4	10	6	4	5	29	12	1	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	12		
30	53	46	47	68	244	239	97	27	10	7	6	3	---	1	1	---	2	---	---	2	---	3	13		
6	1	1	---	---	8	1	2	2	---	1	---	4	---	2	6	2	6	1	4	2	2	---	14		
---	---	---	---	---	---	---	---	1	11	5	4	6	4	2	---	---	---	---	---	---	---	---	15		
14	23	17	16	21	91	46	11	8	2	1	---	1	---	---	---	---	---	---	---	---	---	3	16		
9	10	5	10	8	42	37	42	91	85	57	46	32	17	22	16	8	9	7	8	9	3	5	17		
3	---	2	---	---	5	1	1	2	2	1	2	---	1	3	---	---	2	---	1	---	---	---	18		
1	---	---	---	---	1	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	19		
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	20		
27	20	9	7	2	65	6	1	2	3	1	3	1	1	1	---	---	---	---	---	---	---	---	21		
1	---	---	---	---	1	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	22		
11	---	2	3	3	19	9	---	7	12	14	7	1	4	3	---	2	1	1	1	1	---	3	23		
4	---	---	---	---	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	24		
99	35	9	7	3	153	4	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	25		
---	---	---	---	---	---	---	---	---	---	---	---	3	2	---	2	---	4	5	12	8	7	---	26		
---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	2	2	5	1	2	---	27		
---	---	---	---	---	---	---	---	---	---	---	---	3	2	---	1	---	1	2	6	5	5	---	28		
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	1	1	2	---	---	29		
1,043	228	90	31	19	1,411	46	54	50	53	53	33	42	28	33	28	28	44	55	40	22	32	8	30		
103	21	14	2	6	146	10	25	30	29	20	13	16	14	13	8	13	19	15	13	6	5	1	31		
146	44	7	2	---	199	2	2	---	---	1	1	---	---	---	---	1	2	4	10	3	7	---	232		
671	135	50	13	6	875	12	1	---	1	---	---	5	2	1	2	2	3	1	1	4	---	1	33		
31	7	10	8	1	57	7	1	---	---	---	---	---	---	---	---	---	---	---	6	4	---	8	34		
2	4	---	2	3	11	6	8	9	8	13	7	7	5	3	7	4	5	5	1	1	---	2	35		
90	17	9	4	3	123	9	17	11	15	18	12	14	7	16	11	8	15	30	9	8	12	---	236		

* Includes 1,002 still-births.

Table 84.—CONCLUDED.—Important diseases returned as causes of

Line number.	Causes of death, 1894.	Total deaths, 1894.	Sex.			Months of death, 1894.											
			Males.	Females.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
37	Brain diseases.....	1,829	1,020	809		135	120	118	165	160	155	154	145	171	179	158	167
38	Apoplexy.....	283	167	116		19	17	19	23	23	24	28	14	22	32	31	28
39	Brain, Congestion of.....	81	48	33		2	6	7	8	4	5	4	4	13	9	10	9
40	Brain, Inflammation of.....	302	168	134		24	15	24	38	22	22	26	28	34	26	19	23
41	Epilepsy.....	49	26	23		3	4		7	3	7	3	6	3	4	4	5
42	Meningitis.....	181	86	95		11	16	11	15	15	22	17	16	22	14	11	11
43	Paralysis.....	707	400	307		62	57	43	52	72	51	52	60	56	76	59	66
44	Brain disease, etc.....	226	125	101		14	5	14	20	21	24	24	17	21	18	24	24
45	Cancer.....	677	269	408		42	40	46	46	64	56	62	76	53	68	57	67
46	Tumor.....	149	41	108		4	5	16	11	12	13	11	15	17	13	13	19
47	Childbirth.....	213		213		6	13	24	22	18	25	14	13	17	15	23	22
48	Convulsions.....	412	237	175		26	17	44	32	39	32	36	35	33	37	43	38
49	Diabetes.....	106	65	41		4	7	6	5	9	9	5	6	13	14	16	12
50	Dropsy.....	400	188	212		18	21	36	38	40	37	31	44	28	41	33	31
51	Fever (unspecified).....	75	33	42		2	5	3	6	4	5	7	13	9	5	9	7
52	Fever, Malarial.....	91	49	42		6	2	6	9	9	8	6	2	9	10	17	7
53	Heart diseases.....	1,391	782	609		94	73	126	123	126	119	106	102	121	120	128	152
54	Pericarditis.....	88	42	46		4	4	8	3	9	12	2	11	8	11	8	8
55	Heart diseases, etc.....	898	508	390		55	51	80	80	86	85	77	64	82	72	75	91
56	"Heart failure".....	406	232	173		35	18	38	40	31	22	27	27	31	37	45	53
57	Influenza.....	402	217	185		82	45	55	39	23	15	14	20	18	26	28	37
58	Kidney diseases.....	549	407	142		37	38	54	42	35	45	52	52	42	50	40	60
59	Kidneys, Inflammat'n of.....	414	301	113		30	30	40	31	26	31	43	37	32	36	32	44
60	Kidney disease, etc.....	135	106	29		7	8	14	11	9	14	9	15	10	14	8	16
61	Liver disease, etc.....	162	88	79		14	8	9	18	13	6	17	18	14	13	11	20
62	Lung diseases.....	1,690	940	750		171	165	183	178	134	120	63	85	90	128	151	220
63	Asthma.....	74	45	29		9	4	7	9	2	2	3	12	7	4	7	8
64	Bronchitis.....	174	88	86		18	11	14	18	11	16	10	8	11	11	16	30
65	Pleurisy.....	29	17	12		4	1	3		3	2	2	3		2	6	3
66	Pneumonia.....	1,200	671	529		119	133	140	135	99	79	40	53	52	93	102	154
67	Lungs, Congestion of.....	81	38	43		7	9	4	5	9	8	1	3	8	6	10	11
68	Lung disease, etc.....	182	81	51		14	7	15	11	10	13	7	6	12	12	10	14
69	Rheumatism.....	151	92	59		13	11	11	18	12	10	11	10	9	20	11	15
70	Septicæmia.....	154	60	94		8	14	8	11	14	14	17	16	6	13	16	17
71	Spine disease, etc.....	103	63	40		8	6	12	8	4	6	10	10	11	9	11	8
72	Stomach diseases.....	249	135	114		8	13	24	17	29	27	14	24	27	31	15	20
73	Stomach, Inflammat'n of.....	79	41	38		1	3	9	6	9	10	4	9	7	9	7	5
74	Stomach disease, etc.....	170	94	76		7	10	15	11	20	17	10	15	20	22	8	15
75	Syphilis.....	26	14	12			2	2	7	4	3	3	2		1	1	1
76	Unclassified.....	1,656	854	802		112	104	140	147	133	117	150	137	161	166	146	141

CAUSES OF DEATH BY SEX, MONTHS AND PERIODS OF AGE. 249

death in Michigan, 1894, by sex, months of deaths and periods of age.

Ages by years, under five.					Ages of decedents by five-year periods, 1894.																		Unknown.	Line number.
0 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	0 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.			
247	85	33	26	14	405	74	38	29	43	23	39	64	45	76	108	113	145	145	177	157	130	23	37	
3	1				4			2	5	1	8	11	15	15	29	30	38	35	38	31	19	2	38	
31	8	7	2		48	5	1	1	2	3	5	2	2		1	3	1	3	1	2	1		39	
127	38	16	10		198	37	14	11	6	7	4	7	3	1	3		1	4	3		1	2	2	
1					1	1	1	3	8	2	4	6	3	3	6		1	4	1	2			2	
60	25	8	13	5	111	21	12	6	7	2	2	3	1	4	2	2		1	2		2	3	42	
1	1			1	3	3	9	3	4	5	8	16	18	37	49	57	84	82	113	111	94	11	43	
24	12	2	1	1	40	7	1	3	11	3	8	19	3	16	13	21	20	16	19	11	11		44	
2		1			3		3	2	5	11	25	27	63	76	77	81	89	78	65	35	30	7	45	
8					8	2	2	2	2	16	17	9	13	14	14	7	13	9	13	4	4		46	
								15	55	37	35	43	23	4									1	47
316	36	14	8	4	378	12	2	2	1	2	2	2	2		1	2	2	1		1		2	48	
1	1			2	4	8	4	7	3	6	5	4	3	5	11	6	11	11	8	6	3	1	49	
14	3		2	1	20	1	8	10	7	3	12	8	5	18	22	30	55	51	65	42	38	5	50	
14	5	5	2	1	27	5	4	4	5	3	4		1	3	3	1		3	9	1	2		51	
7	4	8	3	2	24	9	2	5	7	4	4	4	4	3	4	2		6	4	3	5	1	52	
70	10	7	1	2	90	17	16	26	32	37	38	68	55	65	89	114	153	148	163	141	115	24	53	
1					1	2	1	1	1	1	4	5	2	7	8	8	9	14	15	6	3		54	
34	7	6	1	2	50	11	13	20	26	27	29	47	39	35	54	81	103	92	111	80	64	16	55	
35	3	1			39	4	2	5	5	9	5	16	14	23	27	25	41	42	37	55	48	8	56	
40	7	4	1		52	5	1	13	11	6	2	12	7	8	14	14	32	45	49	55	74	2	57	
4	1	1	1	2	9	5	10	15	12	25	24	22	29	20	38	48	54	60	73	60	39	6	58	
2			1	1	4	4	9	13	8	19	18	18	24	17	29	43	42	42	50	43	25	6	59	
2	1	1		1	5	1	1	2	4	6	6	4	5	3	9	5	12	18	23	17	14		60	
18	2	1			21	1	3	2	4	2	2	10	3	16	14	24	16	14	16	10	3	1	61	
375	130	57	28	26	616	47	29	50	53	53	52	52	55	72	71	58	92	106	104	100	67	14	62	
3	1		1		5	1				1	1	1		2	5	6	9	17	12	12	2		63	
68	24	7	2	2	103	4	2	4	6	1	2	3	1		2	3	6	5	6	13	11	2	64	
2	1		1		4	1	1	2	1	2	3		3	3		1	1	4					65	
249	90	46	21	21	427	36	21	38	39	43	36	41	47	58	54	41	60	69	72	62	47	9	66	
29	7	2	2	2	42	1	1	1	1	1	1	2	1	4	3	1	3	3	5	6	5		67	
24	7	2	1	1	35	4	3	5	6	5	9	5	3	5	7	6	13	8	6	7	2	3	68	
2	1			1	4	8	7	4	6	6	6	8	6	8	13	10	16	16	8	13	9	3	69	
17			4	3	24	6	7	6	15	16	15	8	5	7	7	8	6	9	7	3	4	1	70	
37	12	4	4	6	63	6	2	7	1	2	2	1	1	2	3	1	4	4	1	1	2		71	
49	11	5	4	3	72	3	2	11	5	6	2	15	13	12	17	14	19	18	20	11	9		72	
8	3	2	1	1	15	1		2	3	4	2	8	2	4	7	4	7	7	7	3	3		73	
41	8	3	3	2	57	2	2	9	2	2		7	11	8	10	10	12	11	13	8	6		74	
13	1				14				1		2	1	1	3	2		2						75	
310	50	11	2	3	376	19	22	24	28	28	23	31	29	32	30	29	49	48	140	179	552	17	76	

Table 85.—Important diseases and groups of diseases returned as causes of

Line number.	Causes of death, 1894.	State.	Counties—Alcona															
			Alcona.	Alger.	Allegan.	Alpena.	Antrim.	Arenac.	Baraga.	Barry.	Bay.	Benzie.	Berrien.	Branch.	Calhoun.	Cass.	Charlevoix.	Cheboygan.
1	TOTAL DEATHS.....	20,859	32	13	367	141	86	51	35	177	506	67	396	302	398	175	83	137
2	SPECIFIED DISEASES.....	16,975	26	8	303	93	72	38	25	148	391	54	323	263	350	144	67	100
3	<i>Dangerous Commu- nicable Diseases.</i>	4,387	6	---	81	21	12	16	12	28	108	9	66	76	68	31	12	41
4	Consumption.....	2,206	3	---	46	13	10	4	3	19	53	4	38	28	48	20	11	11
5	<i>Other tubercular diseases.</i>	227	1	---	5	---	1	1	---	2	1	1	2	3	4	---	---	---
6	Marasmus.....	92	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7	Meningitis, Tuber.....	41	1	---	---	---	---	---	---	1	1	1	---	---	---	---	---	---
8	Scrofula.....	23	---	---	3	---	---	1	---	---	---	---	---	---	1	---	---	---
9	Tabes mesenterica.....	57	---	---	2	---	1	---	---	1	---	---	2	3	2	---	---	---
10	<i>Other forms of tuberculosis.</i>	14	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---
11	Croup.....	136	1	---	---	---	---	1	4	---	4	---	2	1	---	2	---	---
12	Croup, Membranous.....	44	---	---	---	---	---	---	---	---	---	---	---	3	1	---	---	---
13	Diphtheria.....	642	1	---	2	3	---	6	1	3	34	---	4	23	2	1	---	28
14	Erysipelas.....	43	---	---	1	2	---	---	---	---	1	---	1	---	1	---	---	---
15	Fever, Puerperal.....	33	---	---	1	---	---	1	---	---	---	---	1	1	---	---	---	---
16	Fever, Scarlet.....	163	---	---	---	2	---	2	---	1	2	1	2	4	2	---	---	---
17	Fever, Typhoid.....	536	---	---	10	1	1	---	4	2	8	3	12	13	9	8	1	1
18	Fever, Typho-mal.....	22	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---
19	Fever, Typhus.....	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	Glanders.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21	Measles.....	84	---	---	7	---	---	---	---	1	---	---	---	---	1	---	---	---
22	—German (Rötheln).....	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	Small-pox.....	85	---	---	2	---	---	---	---	---	2	---	---	---	---	---	---	---
24	Chicken-pox.....	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
25	Whooping-cough.....	158	---	---	7	---	---	1	---	---	3	---	3	---	---	---	---	1
26	Bladder diseases.....	43	---	---	2	---	---	---	---	2	---	---	---	2	2	---	---	---
27	Calculus.....	13	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---
28	Cystitis.....	25	---	---	2	---	---	---	---	2	---	---	---	1	1	---	---	---
29	Bladder disease, etc.....	5	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---
30	Bowel diseases.....	2,060	4	3	88	17	15	3	7	14	41	14	32	24	28	14	10	11
31	Bowels, Inflammation of.....	396	1	1	2	5	1	---	1	3	11	1	5	4	4	---	---	2
32	Diarrhea.....	234	---	2	5	---	---	---	---	7	---	---	3	1	2	1	---	1
33	Cholera infantum.....	891	---	---	15	6	9	2	5	3	20	10	16	9	13	7	9	5
34	Dysentery.....	100	---	---	---	---	---	---	---	1	1	1	2	3	3	---	---	1
35	Peritonitis.....	102	3	---	4	---	---	---	---	---	---	---	1	4	---	1	1	1
36	Bowel disease, etc.....	337	---	---	7	6	5	1	1	7	2	2	5	3	6	1	---	1

deaths in Michigan during the year 1894, showing their distribution by counties.

to Keweenaw.

Chippewa.	Clare.	Clinton.	Crawford.	Delta.	Dickinson.	Eaton.	Emmet.	Genesee.	Gladwin.	Gogebic.	G'd Traverse.	Gratiot.	Hillsdale.	Houghton.	Huron.	Ingham.	Ionia.	Iosco.	Iron.	Isabella.	Jackson.	Kalamazoo.	Kalkaska.	Kent.	Keweenaw.	Line number.
96	36	193	34	128	170	303	81	368	13	155	237	179	242	527	252	471	274	99	37	166	467	445	39	1,183	19	1
51	29	171	25	90	102	280	60	305	12	116	197	144	218	369	190	409	239	73	23	140	405	384	33	972	14	2
19	3	39	10	28	27	48	21	47	1	39	49	36	39	92	79	112	65	17	6	38	67	61	6	241	4	3
8	3	21	6	11	14	28	16	25		14	32	24	25	82	30	43	36	11	4	25	44	37	5	138	1	4
2		1				4	1	3		1	2	1	3	4	2	8	2					2		11	1	5
														1		3									1	6
2						1		2	1	1			1	2	1							1		2		7
						1	1						1	1			1							1		8
	1					1		1			1	1	1		1	4	2							6		9
						1																1		1		10
				1	3			2	1	1			1	3	2	4	2	2		1		1		1		11
												1	1		1	2		1	5	1		1		5		12
1		2		3	9	5	1	5		2	6	3	4	5	29	24	18		1	3	1	3		17		13
														2		2	1		1			2		1		14
						1		1				1			1	2					2			1		15
2		4	1	1			1	3		8				7		2	2	2			3	1		11		16
3		6		8	1	7	1	4	1	12	6	5	2	14	10	20	8			1	13	10		43	1	17
								1								2						1		1		18
																										19
																										20
			3			1				1					1	2					1	1		5		21
	1							1																		22
		3																2			2					23
											1													1		24
8		1		4		2	1	2			1	1	3	25	3	1	1	2		2		3		6	1	25
						1		3			1	1	1		2	2	1				1	2		3		26
												1			2		1	1								27
						1		3			1		1			1	1				1	2		2		28
											1						1							1		29
3	3	22	4	15	34	28	6	29	3	17	26	20	15	74	25	39	26	8	5	22	39	46	8	129	1	30
1	2	1	3	2	5	1	10				1	5	4	11	10	7	5	3	2	4	5	7	1	24	1	31
2	2	3	3	15							3			13	4					1	2	2	1	21		32
2	1	10		6	16	13	5	13	3	12	15	9	5	25	7	18	15	2		11	14	8	4	49		33
1		4						2		3	1	1		12	1	3	2	1		2	1	2		6		34
					1	5		3		1	1	2	2			4	1	1		3	3	14		8		35
1	4			3		5		1		1	5	3	4	13	3	7	4	1	3	4	8	13	2	21		36

Table 85.—CONTINUED.—*Important diseases returned as*

Line number.	Causes of death, 1894.	Counties—Alcona													
		State.	Alcona.	Alger.	Allegan.	Alcona.	Antrim.	Areac.	Baraga.	Barry.	Bay.	Benzie.	Berrien.	Branch.	Calhoun.
37	Brain diseases.....	1,529	3	1	40	8	8	2	1	28	37	1	45	25	45
38	Apoplexy.....	283			4	2	1			5	3		10	8	6
39	Brain, Congestion of.....	81			1	1				1	5	1	3		2
40	Brain, Inflammation of.....	302			6		1			2	10		8		6
41	Epilepsy.....	49			1					2			2		3
42	Meningitis.....	181	2		4		5		1	2	4		3	1	6
43	Paralysis.....	707		1	19	1		1		13	9		18	14	21
44	Brain disease, etc.....	226	1		5	4	1	1		3	6		3	3	4
45	Cancer.....	677	1		9	2		2		10	11	1	28	17	15
46	Tumor.....	149			7		1			2	1		2	2	8
47	Childbirth.....	213	1		2	2	1	1	1	3	5		2	1	1
48	Convulsions.....	412	1		5	2			1		16	2	6	2	7
49	Diabetes.....	106			1					3	2		4	2	4
50	Dropsy.....	400			8		3	2		5	13	1	12	8	3
51	Fever (unspecified).....	75			3					1			2	1	1
52	Fever, Malarial.....	91			2			1		2	5		2	2	
53	Heart diseases.....	1,391	2	1	80	12	9	4	2	11	20	6	38	85	52
54	Pericarditis.....	88			1	2	1			9		1	3	2	5
55	Heart disease, etc.....	898	2	1	21	8	7	3		9	19	5	23	17	30
56	"Heart failure".....	405			8	2	1	1	2	2	1		7	16	17
57	Influenza.....	402	1		6	1	6			4	8		8	11	8
58	Kidney diseases.....	549	1		13	2	1			6	13	2	7	6	18
59	Kidneys, Inflamma'n of.....	414	1		10		1			3	9	2	4	4	15
60	Kidney disease, etc.....	135			3	2				3	4		3	2	3
61	Liver disease, etc.....	162			2	1	1			5	3	1	4	5	2
62	Lung diseases.....	1,690	2	1	23	10	12	8	1	10	45	10	27	15	84
63	Asthma.....	74			2	1	1				6		1	2	1
64	Bronchitis.....	174			3	1	1				9		2		1
65	Pleurisy.....	29	1								3	1		1	
66	Pneumonia.....	1,200	1	1	13	4	9	1	1	4	26	4	21	10	26
67	Lungs, Congestion of.....	81			4	1	1	1		3	1	1	2	2	1
68	Lung disease, etc.....	132			1	3		1		3		4	1		5
69	Rheumatism.....	151			1	1		1		1	3		2	3	3
70	Septicemia.....	154			3	2		1			9	1	2	1	5
71	Spine disease, etc.....	103				1				1	6		1	1	2
72	Stomach diseases.....	249			7	2				1	11	1	6	2	8
73	Stomach, Inflamma'n of.....	79			2	1					2		2	1	2
74	Stomach disease, etc.....	170			5	1				1	9	1	4	1	3
75	Syphilis.....	26									1				
76	Unclassified.....	1,656	4	2	25	9	3	2		11	33	5	37	22	41

causes of death in Michigan during the year 1894, by counties.

to Keweenaw.

Chippewa.	Clare.	Clinton.	Crawford.	Delta.	Dickinson.	Eaton.	Emmet.	Genesee.	Gladwin.	Gogebic.	Gr'd Traverse.	Gratiot.	Hillsdale.	Houghton.	Huron.	Ingham.	Ionia.	Iosco.	Iron.	Isabella.	Jackson.	Kalamazoo.	Kalkaska.	Kent.	Keweenaw.	Line number.
2	6	24	1	4	4	42	2	51	1	5	32	19	23	18	9	50	32	3	1	14	53	97	3	102	37	
1	1	1	1	1	1	11	1	8	1	1	6	1	5	1	1	7	3	1	1	2	11	14	1	11	38	
2	1	1	1	1	1	1	1	3	1	2	2	2	1	10	5	6	3	2	1	2	3	1	2	15	40	
1	1	1	1	1	1	1	1	1	1	1	2	2	1	10	5	1	1	1	1	1	1	8	1	1	41	
2	14	4	1	1	23	3	1	5	1	1	15	6	13	3	2	7	23	1	1	2	4	6	1	21	42	
2	2	2	1	1	4	25	1	5	1	1	5	3	4	3	1	25	23	1	1	6	31	41	1	37	43	
1	3	9	3	2	13	2	17	1	1	4	7	7	7	10	5	15	10	4	4	23	22	1	57	45		
1	1	1	1	1	4	1	1	1	3	2	1	2	7	1	2	3	1	1	1	3	3	4	4	4	46	
2	3	1	1	3	1	5	2	2	2	2	5	5	2	4	1	3	2	6	5	9	47	26	2	48		
1	1	1	2	2	4	1	5	9	3	1	2	32	5	3	4	1	1	4	4	26	2	48	6	49		
2	2	3	6	1	3	1	6	1	1	1	1	2	2	1	1	1	2	6	1	14	7	14	50			
1	1	1	3	3	1	1	1	1	1	1	1	2	5	1	1	1	1	1	1	1	1	1	3	51		
1	1	1	3	3	1	2	2	2	1	1	1	2	2	2	1	2	1	1	1	2	4	2	2	52		
5	4	10	1	8	2	27	2	40	1	2	23	16	41	9	10	36	18	5	10	48	32	3	72	53		
1	1	1	1	1	1	3	1	30	1	2	1	3	1	1	2	2	3	1	1	2	2	1	11	54		
2	1	8	6	1	15	1	30	1	2	9	10	20	5	2	26	9	4	10	2	28	22	1	44	55		
3	2	2	1	2	1	9	1	8	13	3	21	3	8	8	6	1	18	10	2	18	10	2	17	56		
3	2	6	1	4	6	5	7	4	6	10	4	3	13	8	1	1	7	10	9	57	33	58				
2	1	5	2	2	10	3	10	2	4	5	13	12	4	17	9	1	5	21	8	33	58					
2	1	4	2	1	8	2	9	1	3	5	11	9	2	17	8	1	4	17	6	21	59					
1	1	1	1	1	2	1	1	1	1	1	1	2	3	2	1	1	1	4	2	12	60					
1	1	1	2	2	2	2	2	2	2	2	2	1	3	2	6	7	1	10	3	11	61					
6	5	17	2	10	11	22	2	34	12	24	7	10	49	15	27	14	7	5	17	35	34	5	125	5	62	
1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	63		
2	1	1	1	1	4	1	1	3	1	1	1	1	14	1	1	1	2	1	3	11	1	1	11	1	64	
1	4	15	8	5	17	2	24	6	20	3	9	5	21	10	16	12	7	3	15	28	25	4	89	4	65	
2	2	2	2	2	2	2	2	2	2	2	2	2	1	7	4	7	1	1	2	4	1	1	11	67		
3	3	1	1	1	5	1	4	1	3	1	1	2	2	1	5	1	4	2	1	7	69					
1	1	1	1	1	2	1	5	2	2	2	2	1	2	6	3	3	1	1	4	3	7	7	2	68		
1	1	1	1	1	1	1	1	1	1	1	1	2	2	4	2	2	1	4	2	2	2	2	2	2	69	
1	6	2	4	4	4	8	2	1	2	3	3	2	4	8	1	1	2	9	1	16	7	9	1	16	70	
1	6	2	3	1	3	5	2	1	1	3	1	1	3	2	1	4	4	1	1	1	3	1	7	9	71	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	72	
3	1	16	4	5	7	26	6	25	3	18	17	11	34	40	16	49	26	12	2	13	63	29	4	92	1	

Table 85.—CONTINUED.—Important diseases returned

Line number.	Causes of death, 1894.	Counties—Lake															
		Lake.	Lapeer.	Leelanau	Lenawee.	Livingston.	Luce.	Mackinac.	Macomb.	Manistee.	Manitou.	Marquette.	Mason.	Mecosta.	Menominee.	Midland.	Missaukee.
1	TOTAL DEATHS	57	202	94	428	175	17	58	291	246	18	356	180	187	290	113	51
2	SPECIFIED DISEASES	41	172	79	373	152	10	38	257	170	8	270	137	144	193	95	35
3	<i>Dangerous Commu- nicable Diseases.</i>	11	41	28	98	32	2	8	58	51	2	87	40	38	61	28	12
4	Consumption	4	29	20	64	17	1	7	35	27	2	24	17	24	27	10	3
5	<i>Other tubercular diseases.</i>	--	2	3	5	1	--	--	3	1	--	--	--	1	1	--	1
6	Marasmus	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--
7	Meningitis, Tuber.	--	1	1	--	--	--	--	1	--	--	--	--	1	--	1	--
8	Scrofula	--	1	2	1	--	--	--	--	--	--	--	--	--	--	--	--
9	Tabes mesenterica	--	--	--	4	1	--	--	2	--	--	--	--	--	--	--	1
10	Other forms of tuberculosis	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	1
11	Croup	--	--	1	1	1	--	--	3	--	--	25	1	1	5	2	2
12	Croup, Membranous	--	--	--	1	2	--	--	--	--	--	--	--	--	--	--	1
13	Diphtheria	--	--	1	9	6	--	1	3	6	--	3	11	--	7	11	1
14	Erysipelas	--	--	--	2	1	--	--	--	--	--	--	--	--	--	--	1
15	Fever, Puerperal	--	--	1	--	1	--	--	1	--	--	1	--	--	--	--	--
16	Fever, Scarlet	4	3	1	1	1	--	--	5	--	--	7	--	5	3	--	5
17	Fever, Typhoid	2	6	1	13	2	--	--	5	13	--	12	9	4	8	4	8
18	Fever, Typho-mal.	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Fever, Typhus	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
20	Glanders	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
21	Measles	--	--	--	--	--	--	--	2	--	--	7	1	--	--	--	9
22	—German (Rötheln)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Small-pox	--	--	--	1	--	--	--	--	--	--	--	--	--	3	--	2
24	Chicken-pox	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
25	Whooping-cough	--	1	--	1	--	1	--	2	3	--	9	--	3	7	1	1
26	Bladder diseases	--	--	--	2	3	--	--	--	1	--	--	--	--	--	--	1
27	Calculus	--	--	--	1	2	--	--	--	1	--	--	--	--	--	--	--
28	Cystitis	--	--	--	1	1	--	--	--	--	--	--	--	--	--	--	1
29	Bladder disease, etc.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
30	Bowel diseases	7	24	10	33	15	--	6	22	35	1	38	23	17	34	17	4
31	Bowels, Inflam'tion of.	2	11	7	2	4	--	2	7	15	1	6	3	5	4	2	4
32	Diarrhea	2	--	--	3	--	--	--	5	5	--	9	1	1	3	--	1
33	Cholera infantum	3	8	1	16	8	--	2	6	7	--	15	13	5	23	15	3
34	Dysentery	--	3	--	2	3	--	--	1	--	--	--	1	1	--	--	--
35	Peritonitis	--	--	--	4	--	--	--	1	2	--	--	--	--	1	--	1
36	Bowel disease, etc.	--	2	2	6	--	--	2	2	6	--	8	5	5	3	--	5

as causes of death in Michigan during the year 1894, by counties.

to Wexford.

Muskegon.	Newaygo.	Oakland.	Oceana.	Ogemaw.	Ontonagon.	Oscola.	Oscoda.	Otsego.	Ottawa.	Presque Isle.	Rosecommon.	Saginaw.	Sanilac.	Schooner.	Shiawassee.	St. Clair.	St. Joseph.	Tuscola.	Van Buren.	Washtenaw.	Wayne.	Wexford.	Line number.
344	108	422	129	13	48	153	3	35	358	47	2	919	274	91	250	493	244	192	326	394	3,443	117	1
261	68	366	92	11	32	120	2	21	285	16	1	788	223	52	219	419	207	162	270	324	2,834	87	2
75	20	68	21	3	4	83	1	5	81	4		211	63	11	69	127	41	45	47	71	865	20	3
47	15	46	10	1	3	15	1	1	42			89	36	6	35	66	27	24	36	50	326	4	4
	1	7	2			2			3			9	1			2	2	3	1	1	109	1	5
																					85		6
		1	2						1				5				1		1		6		7
		1															1	2		1	2	1	8
	1	4				2			2			3	1					2			4		9
		1										1									6		10
3				1								4	1		1	3		1			37	1	11
1	2											8			1	2					4		12
9		1				4		2	15	3		59	4		12	10	1	6	2	3	201	3	13
	1	3	1						1			6			1	1			1		6	2	14
						3			1	1		3	2						1		5		15
1						3			1			1		1	3	9	4	5	1	9	20	5	16
7		4	4	1		4		1	14			14	11	3	12	20	3	6	5	3	66	3	17
												3				4				3	5		18
																					2		19
																							20
	1	2	1	1								9			3	2				1	20		21
																							22
1		5															4				58		23
																							24
6			2			2		1	1			6	8		1	7				1	12	1	25
												1	1			1			1	1	5		26
												1									4		27
													1			1			1	1	1		28
																					1		29
27	12	40	9		9	17	1	5	37	2		112	16	13	22	63	21	20	29	88	313	19	30
7	1	10	1			3	1	1	5	1		26	6		4	23	3	4	4	10	43	3	31
3		2				1			16	1		7	5	2	1	5		3	1		60		32
6	8	12	5		6	11		4	9			61	5	4	10	30	9	9	11	10	136	11	33
3	1	3	1			1			4			2			3	1	1		4	1	9	1	34
4	1	4										1			2	1	1		1	5	12		35
4	1	9	2		3	1			3			15		7	2	3	7	4	8	7	53	4	36

Table 85.—CONCLUDED.—Important diseases returned

Line number.	Causes of death, 1894.	Counties—Lake																
		Lake.	Lapeer.	Leelanau.	Lenawee.	Livingston.	Luce.	Mackinac.	Macomb.	Manistee.	Manitou.	Marquette.	Mason.	Mecona.	Menominee.	Midland.	Missaukee.	Monroe.
37	Brain diseases.....	2	14	9	28	21	1	5	44	12	---	19	14	9	17	11	2	30
38	Apoplexy.....	---	1	2	9	3	---	---	8	2	---	3	---	1	2	1	---	3
39	Brain, Congestion of.....	---	2	1	---	3	---	---	1	3	---	---	1	---	---	---	---	3
40	Brain, Inflammation of.....	---	---	1	2	2	---	4	8	3	---	8	3	1	8	---	---	6
41	Epilepsy.....	1	1	1	1	---	---	---	---	---	---	---	1	1	1	---	1	3
42	Meningitis.....	---	---	---	5	1	---	---	1	---	---	2	2	1	5	1	---	1
43	Paralysis.....	1	9	2	18	11	1	1	23	3	---	5	5	5	1	7	1	15
44	Brain disease, etc.....	---	1	2	3	2	---	---	3	1	---	1	2	---	---	2	---	5
45	Cancer.....	1	10	1	25	8	1	---	12	2	---	11	2	4	7	5	---	11
46	Tumor.....	---	---	3	3	2	1	---	2	1	---	---	1	---	---	1	---	1
47	Childbirth.....	---	1	1	4	3	---	2	2	1	---	5	---	5	3	2	2	5
48	Convulsions.....	---	1	2	2	2	---	---	5	6	---	---	8	1	11	1	3	4
49	Diabetes.....	---	---	---	6	3	---	---	1	1	---	---	---	1	1	---	---	2
50	Dropsy.....	2	7	1	16	4	---	3	4	2	---	13	---	1	---	---	---	16
51	Fever (unspecified).....	---	---	---	1	---	---	1	---	2	---	1	---	1	---	---	1	7
52	Fever, Malarial.....	1	---	---	1	---	---	---	1	2	---	---	1	4	---	---	---	1
53	Heart diseases.....	4	16	2	40	28	2	4	23	8	2	20	10	10	6	7	---	20
54	Pericarditis.....	2	---	---	2	2	---	---	5	1	---	---	2	1	---	---	---	1
55	Heart disease, etc.....	2	15	2	28	22	2	3	17	5	2	19	7	3	5	3	---	11
56	"Heart failure".....	---	---	---	10	4	---	1	1	2	---	1	1	6	1	4	---	9
57	Influenza.....	---	5	4	15	2	---	2	7	2	---	2	1	5	---	5	---	22
58	Kidney diseases.....	4	2	---	16	6	---	1	9	5	---	9	1	5	8	3	1	4
59	Kidneys, Inflamma'n of.....	2	2	---	13	4	---	---	7	5	---	8	1	2	3	3	1	2
60	Kidney disease, etc.....	2	---	---	3	1	---	1	2	---	---	1	---	3	---	---	---	2
61	Liver disease, etc.....	---	4	1	3	2	---	---	2	1	---	---	1	1	1	---	---	4
62	Lung diseases.....	7	19	7	34	7	3	2	33	21	3	34	20	14	28	4	2	25
63	Asthma.....	---	3	1	3	---	---	1	2	---	---	---	1	1	1	---	---	---
64	Bronchitis.....	---	1	---	2	1	---	---	2	6	3	5	2	3	5	---	---	3
65	Pleurisy.....	---	1	---	---	---	---	---	---	1	---	1	---	---	---	---	---	---
66	Pneumonia.....	6	13	6	27	6	1	1	26	11	---	29	14	9	23	2	2	21
67	Lungs, Congestion of.....	1	1	---	---	---	---	---	2	1	---	---	1	1	1	---	---	---
68	Lung disease, etc.....	---	---	---	2	---	2	---	1	2	---	1	3	1	---	---	---	1
69	Rheumatism.....	---	4	1	5	---	---	---	1	1	---	1	2	4	---	---	---	2
70	Septicemia.....	1	2	1	1	1	---	---	3	---	---	1	2	9	3	2	1	1
71	Spine disease, etc.....	---	1	---	3	1	---	1	3	1	---	1	---	2	---	---	1	1
72	Stomach diseases.....	---	2	---	2	3	---	---	6	2	---	---	2	4	1	---	---	5
73	Stomach, Inflamma'n of.....	---	1	---	---	1	---	---	1	1	---	---	---	2	---	---	---	1
74	Stomach disease, etc.....	---	1	---	2	2	---	---	5	1	---	---	2	2	1	---	---	4
75	Syphilis.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
76	Unclassified.....	1	18	8	25	10	---	3	19	13	---	24	9	9	17	9	6	50

as causes of death in Michigan during the year 1894, by counties.

to Wexford.

to Wexford.																						
Muskegon.	Newaygo.	Oakland.	Oceana.	Ogemaw.	Oniyagon.	Oceola.	Oscoda.	Otsego.	Ottawa.	Presque Isle.	Roscommon.	Saginaw.	Sanilac.	Schoolcraft.	Shiawassee.	St. Clair.	St. Joseph.	Tuscola.	Van Buren.	Washtenaw.	Wayne.	Wexford.
30	1	76	14	---	2	10	---	1	30	---	---	74	12	1	25	32	33	10	30	33	253	8
1	---	16	1	---	2	2	---	---	4	---	---	12	---	---	1	4	7	2	6	11	51	1
1	---	4	2	---	---	---	---	---	---	---	---	1	---	---	1	2	1	3	4	3	7	1
8	---	4	1	---	---	---	---	---	15	---	---	17	5	---	6	7	2	---	1	6	70	3
---	---	5	---	---	---	1	---	---	2	---	---	2	---	---	---	1	---	---	---	---	3	---
7	1	4	3	---	---	3	---	---	1	---	---	12	1	---	---	---	4	1	1	4	26	1
10	---	13	6	---	---	---	---	1	6	---	---	25	4	1	13	13	16	4	12	8	66	5
3	---	30	1	---	---	4	---	---	2	---	---	5	2	---	4	5	3	6	1	30	43	44
6	2	13	1	1	2	3	---	1	15	1	---	23	8	3	6	8	15	11	12	17	90	2
2	---	8	---	---	---	2	---	---	---	---	---	4	5	---	3	2	1	3	6	3	29	46
2	3	1	2	1	---	2	---	---	2	1	---	10	3	3	---	3	2	2	2	8	32	47
11	1	---	---	2	3	1	---	---	4	---	---	27	2	1	---	13	1	1	2	2	133	1
2	---	1	---	---	---	---	---	---	1	---	---	4	1	---	3	2	---	1	1	4	13	49
7	1	7	3	---	---	4	---	---	14	1	---	11	7	1	6	12	9	5	5	12	70	3
---	---	1	---	---	---	---	---	---	6	---	---	---	---	1	1	2	2	---	2	2	5	---
3	1	2	1	---	---	---	---	---	---	---	1	10	3	---	1	4	---	---	2	1	12	52
25	10	32	8	1	2	10	---	1	19	2	---	60	8	---	12	35	11	13	33	39	176	9
2	---	3	1	---	---	1	---	---	1	1	---	2	---	---	5	22	7	---	3	2	11	---
16	7	17	6	1	---	4	---	1	17	1	---	47	4	---	7	13	4	10	16	14	117	7
7	3	12	1	---	2	5	---	---	1	1	---	11	4	---	7	13	4	3	14	23	48	2
5	3	10	4	---	2	3	---	1	7	2	---	17	14	---	5	16	10	5	4	6	34	2
10	---	21	2	---	1	5	---	1	6	---	---	22	11	---	9	18	5	5	19	11	76	1
9	---	17	2	---	---	3	---	1	3	---	---	16	7	---	9	9	4	3	16	9	48	1
1	---	4	---	---	1	2	---	---	3	---	---	6	4	---	---	4	1	2	3	2	23	---
1	---	3	1	---	---	3	---	2	4	---	---	2	5	1	3	4	1	1	4	2	21	2
24	4	39	9	---	8	14	---	1	20	---	---	81	18	4	29	33	14	15	37	28	306	11
1	---	2	---	---	---	---	---	---	1	---	---	2	---	---	1	3	2	1	1	3	16	---
2	1	2	---	---	---	1	---	---	5	---	---	17	2	1	1	1	1	---	1	36	63	64
2	---	---	---	---	---	---	---	---	---	---	---	1	1	---	---	---	---	---	---	3	3	1
15	1	32	8	---	3	11	---	1	14	---	---	50	13	2	18	22	13	11	34	20	227	9
1	---	2	---	---	---	1	---	---	---	---	---	2	---	1	4	5	---	---	3	6	---	67
3	2	1	1	---	---	1	---	---	---	---	---	9	2	---	3	3	---	2	3	1	18	1
4	2	3	---	1	---	---	---	---	1	---	---	14	1	1	4	1	3	1	3	4	24	---
3	---	2	---	---	1	3	---	1	4	---	---	6	4	---	---	2	3	2	2	4	15	1
1	---	---	---	1	---	1	---	---	1	---	---	4	6	1	2	3	3	---	1	2	19	2
9	9	7	7	---	---	3	---	---	3	2	---	10	2	1	1	4	2	4	3	4	36	1
2	---	1	3	---	---	---	---	---	---	---	---	3	1	1	---	1	1	2	1	---	16	---
6	2	6	4	---	---	3	---	---	3	2	---	7	1	---	1	3	1	2	2	4	20	1
1	---	---	---	---	---	---	---	---	---	---	---	1	---	1	---	---	---	---	---	---	17	---
14	6	33	9	1	3	6	---	2	30	1	---	74	33	9	18	39	30	18	25	37	285	5

Table 86.—Important diseases and groups of diseases returned as

Line No.	Causes of death, 1899-94.	Years,										
		1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.	1885.	1884.
1	TOTAL DEATHS	20,959	21,982	21,729	22,079	21,642	20,315	21,764	19,482	18,187	16,648	18,056
2	SPECIFIED DISEASES.....	16,975	17,911	17,578	18,115	17,612	16,767	18,114	16,267	15,305	13,708	15,133
3	<i>Dangerous Commu-</i>											
4	<i>nicable Diseases.....</i>	4,387	5,058	5,029	5,190	5,254	4,762	5,488	5,249	4,976	4,481	5,068
5	{ Consumption.....	2,206	* 2,154	2,060	† 2,080	2,207	2,187	2,424	2,127	2,051	1,964	2,198
6	{ <i>Other tubercular</i>											
7	<i>diseases.....</i>	227	* 196	208	176	199	116	141	143	150	147	188
8	Marasmus.....	92	* 89	109	90	74	16	30	21	57	60	44
9	Meningitis, Tuber..	41	* 38	38	27	41	43	47	62	40	34	49
10	Scrofula.....	23	* 21	17	16	34	26	22	27	26	25	42
11	Tabes mesenterica..	57	* 27	37	23	32	21	31	24	21	19	34
12	{ Other forms of }											
13	{ tuberculosis..... }	14	* 21	12	20	18	10	11	8	7	9	14
14	Croup.....	136	217	211	253	415	* 357	384	282	296	291	285
15	Croup, Membranous..	44	42	80	35	56	* 46	90	117	104	46	40
16	Diphtheria.....	642	959	1,020	1,080	1,266	849	723	985	1,117	1,054	1,065
17	Erysipelas.....	43	57	64	66	46	52	82	70	68	68	71
18	Fever, Puerperal.....	33	42	42	35	26	32	51	33	30	38	29
19	Fever, Scarlet.....	163	360	442	400	222	240	323	318	319	245	326
20	Fever, Typhoid.....	536	639	626	684	465	637	638	770	† 498	387	514
21	Fever, Typho-mal....	22	28	23	16	27	* 43	31	52	25	7	29
22	Fever, Typhus.....	2	4	6	7	11	4	3	7	2	1	5
23	Glanders.....			1								
24	Measles.....	84	127	72	225	† 229	104	414	285	129	38	144
25	—German (Rötheln)...	2	1	2						*		
26	Small-pox.....	85	3	1	1	6	3	3		6	3	3
27	Chicken-pox.....	4	2	4	4	4	2	2	1	1	4	1
28	Whooping-cough.....	158	172	147	158	75	140	174	110	185	138	160
29	Bladder diseases.....	49	41	50	82	83	40	29	49	40	41	36
30	Calculus.....	13	10	11	12	10	7	14	17	12	21	16
31	Cystitis.....	25	25	22	17	12	20	5	24	23	15	12
32	Bladder disease, etc....	5	6	17	3	11	13	10	8	5	5	8
33	Bowel diseases.....	2,060	2,085	1,681	1,900	1,844	1,961	1,947	1,818	1,726	1,210	1,921
34	Bowels, Inflammation of..	396	433	334	353	315	352	390	339	327	324	350
35	Diarrhea.....	234	371	277	292	325	450	371	414	378	261	409
36	Cholera infantum.....	891	833	606	799	592	722	767	626	653	300	781
37	Dysentery.....	100	79	74	89	123	153	153	183	158	106	160
38	Peritonitis.....	102	83	89	116	98	50	46	35	32	22	27
39	Bowel disease, etc.....	387	236	281	251	386	229	220	221	178	138	194

NOTE.—The arrangement of causes of death is uniform in Tables 84-87. See text beginning on page 271, to which reference may be made by line numbers.

causes of death in Michigan for each of the years 1869-94, inclusive.

1869-94.															Line No.
1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
16,906	16,425	19,238	16,102	14,407	12,766	12,919	12,576	11,990	12,500	14,258	13,371	9,728	10,766	9,145	1
13,664	13,366	15,922	13,024	11,516	9,922	10,076	9,901	9,257	9,870	11,798	11,243	7,911	8,824	7,292	2
5,062	5,279	6,563	5,262	4,657	3,919	3,833	3,569	3,271	3,322	4,028	4,065	3,092	3,561	2,645	3
1,992	1,804	1,954	1,829	1,680	1,641	1,664	1,590	1,479	1,392	1,447	1,467	1,308	1,451	1,233	4
126	162	174	144	112	125	138	134	128	129	156	149	119	148	80	5
9	52	37	26	9	6	11	8	8	8	10	3	-----	1	-----	6
48	48	64	42	48	55	60	68	60	59	81	84	65	65	11	7
25	29	31	32	36	38	32	26	34	23	43	40	38	60	55	8
32	26	36	28	16	16	23	22	19	28	15	15	12	9	8	9
12	7	6	16	8	15	12	10	12	11	7	7	4	8	6	10
284	308	316	257	233	199	145	157	156	132	166	153	146	124	105	11
52	46	64	65	45	37	19	21	11	10	6	10	9	3	-----	12
1,007	1,416	† 2,063	1,542	1,480	889	596	327	* 213	216	219	196	121	121	89	13
85	82	86	88	92	* 75	69	86	106	104	153	151	87	88	69	14
45	31	57	39	41	* 16	25	32	42	54	51	44	26	36	21	15
673	592	384	371	418	429	† 404	399	423	440	* 580	565	606	852	252	16
439	463	384	513	397	329	446	426	433	611	* 677	621	357	574	437	17
11	32	49	9	7	18	4	6	-----	7	1	-----	-----	-----	-----	18
11	10	19	11	* 14	5	29	11	14	16	17	31	8	1	9	19
-----	-----	-----	-----	1	1	-----	-----	-----	-----	-----	1	-----	-----	-----	20
258	150	256	125	167	16	62	118	134	46	* 245	180	67	56	147	21
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	22
5	101	82	3	6	6	† 102	76	26	18	* 92	302	74	10	42	23
2	1	3	2	2	1	-----	5	3	1	1	2	1	1	3	24
92	86	142	264	162	132	131	181	101	153	* 208	192	68	119	158	25
39	16	29	45	35	37	30	44	40	34	37	33	32	34	30	26
16	6	14	23	23	23	16	34	21	20	25	23	24	25	24	27
17	6	10	16	6	10	11	6	14	7	9	6	4	7	6	28
6	4	4	6	6	4	3	4	5	7	3	4	4	2	-----	29
1,315	1,357	2,301	1,443	1,039	924	1,255	1,209	1,102	1,288	1,566	1,781	885	1,571	983	30
294	276	342	267	237	214	226	239	213	206	236	234	134	187	119	31
267	269	501	310	226	173	290	304	283	380	388	437	216	407	311	32
465	428	357	499	300	243	370	331	239	273	306	394	129	181	106	33
114	96	270	160	135	153	221	195	162	304	319	456	173	374	236	34
16	21	19	10	16	11	8	8	14	8	9	13	7	5	5	35
159	177	212	197	125	125	140	131	136	110	263	247	176	217	204	36

* Year in which disease was placed on the list of diseases to be restricted by the State Board of Health, which was established in 1873.

† Year in which active measures for restriction and prevention were undertaken.

Table 86.—CONCLUDED.—Important diseases returned

Line No.	Causes of death, 1899-94.	Years,										
		1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.	1885.	1884.
37	Brain diseases.....	1,829	1,709	1,594	1,614	1,544	1,511	1,615	1,441	1,485	1,304	1,358
38	Apoplexy.....	263	240	219	212	153	159	147	141	161	121	132
39	Brain, Congestion of.....	81	79	68	87							
40	Brain, Inflammation of.....	302	307	292	315	318	341	405	319	332	296	310
41	Epilepsy.....	49	66	62	42	54	40	65	54	49	50	43
42	Meningitis.....	151	172	143	204	180	164	194	184	182	174	238
43	Paralysis.....	707	663	571	596	558	542	553	465	485	400	397
44	Brain disease, etc.....	228	183	174	157	281	263	251	278	226	263	253
45	Cancer.....	677	644	558	534	533	492	480	453	391	403	361
46	Tumor.....	149	156	139	157	123	102	108	93	91	104	85
47	Childbirth.....	218	222	244	255	196	254	250	286	223	230	244
48	Convulsions.....	412	520	548	547	349	458	513	474	431	452	436
49	Diabetes.....	106	111	69	78	63	74	71	61	68	65	49
50	Dropsy.....	400	446	389	397	422	337	464	342	334	380	324
51	Fever.....	75	100	129	107	123	111	164	117	123	96	133
52	Fever, Malarial.....	91	122	146	133	146	197	200	171	168	142	186
53	Heart diseases.....	1,891	1,429	1,829	1,846	1,185	1,132	1,055	964	794	799	791
54	Pericarditis.....	88	80	97	70	70	61	88	107	64	69	70
55	Heart disease, etc.....	898	996	864	901	1,115	1,071	969	847	730	730	721
56	"Heart failure".....	406	353	368	375							
57	Influenza.....	402	555	907	1,076	1,084	176	2	2	3	2	
58	Kidney diseases.....	549	479	442	407	331	347	351	327	322	304	264
59	Kidneys, Inflamma'n of.....	414	375	332	271	227	242	241	226	244	215	191
60	Kidney disease, etc.....	135	104	110	138	104	105	110	101	78	89	73
61	Liver disease, etc.....	162	166	121	167	140	158	172	154	120	147	154
62	Lung diseases.....	1,690	1,966	1,765	1,702	1,786	1,578	1,889	1,449	1,302	1,194	1,210
63	Asthma.....	74	79	65	77	74	59	65	59	66	62	61
64	Bronchitis.....	174	182	184	138	188	120	199	121	97	113	96
65	Pleurisy.....	29	23	30	24	27	25	46	25	20	16	18
66	Pneumonia.....	1,200	1,385	1,298	1,248	1,224	1,132	1,313	970	857	804	840
67	Lungs, Congestion of.....	81	77	87	99							
68	Lung disease, etc.....	182	115	101	116	273	242	286	274	262	199	193
69	Rheumatism.....	151	141	149	141	120	154	154	158	145	111	133
70	Septicemia.....	154	177	167	172	153	191	157	121	125	129	94
71	Spine disease, etc.....	103	105	94	106	110	124	114	95	131	88	114
72	Stomach diseases.....	249	232	178	192	177	153	172	165	118	122	120
73	Stomach, Inflamma'n of.....	79	64	53	49	27	39	43	35	37	44	39
74	Stomach disease, etc.....	170	169	125	133	150	114	129	130	81	78	81
75	Syphilis.....	26	21	11	6	7	5	14	4	9	16	14
76	Unclassified.....	1,656	1,580	1,949	1,876	1,889	2,455	2,710	2,324	2,230	2,046	2,058

CAUSES OF DEATH, TWENTY-SIX YEARS, 1869-94.

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as causes of death in Michigan, 1869-94.

1869-94.															Line No.
1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	
1,186	1,215	1,358	1,118	944	889	1,001	1,011	850	698	1,655	1,161	679	687	663	37
87	89	111	123	105	95	86	107	94	63	81	70	70	54	65	38
286	276	361	301	222	225	291	275	232	261	333	330	216	233	226	40
45	48	63	41	42	31	35	31	31	30	38	28	25	18	12	41
229	227	332	159	104	110	138	123	166	135	812	360	24	11	12	42
345	367	260	279	262	242	244	233	172	171	171	154	144	123	120	43
189	218	228	215	209	186	207	242	155	183	225	219	200	249	237	44
383	301	310	285	272	269	266	241	203	188	172	188	105	120	113	45
58	68	86	76	65	56	45	41	55	34	48	31	32	23	20	46
288	213	202	201	210	178	166	158	194	209	269	236	158	146	127	47
344	356	337	348	275	288	296	275	258	258	306	315	238	251	256	48
58	52	49	44	42	33	39	19	36	27	31	35	33	29	25	49
296	317	283	272	271	256	236	236	237	245	271	234	228	270	251	50
117	131	193	191	136	124	106	174	132	187	208	219	187	201	289	51
153	198	241	147	125	125	141	108	116	144	201	206	153	163	121	52
762	627	620	551	538	444	448	394	330	411	396	366	291	311	274	53
73	64	101	68	54	76	53	54	68	71	69	56	49	43	22	54
689	563	519	483	454	368	395	340	312	340	327	310	242	268	252	55
2	1	2	3	5	3	2	-----	6	2	12	6	2	-----	-----	56
264	206	187	154	113	113	98	80	54	63	68	60	59	45	32	57
196	145	112	95	54	45	45	32	23	31	32	27	24	12	3	58
68	61	75	59	59	68	48	48	31	32	36	33	35	33	29	59
140	145	143	125	124	141	126	121	112	121	132	135	103	110	71	60
1,304	1,216	1,262	1,279	1,107	859	799	894	1,187	1,228	1,043	962	700	625	621	61
51	50	37	39	39	31	25	23	20	20	21	25	17	22	24	62
83	100	64	50	49	44	42	42	43	32	20	25	19	20	11	63
20	16	19	26	20	16	14	19	14	15	18	20	12	11	9	64
827	834	941	920	794	552	559	665	846	987	798	701	432	405	455	65
223	216	201	244	205	216	159	215	214	219	191	191	170	167	122	66
113	107	123	85	85	61	76	70	74	73	72	101	51	44	49	67
113	80	52	18	6	8	5	5	4	2	2	1	-----	1	-----	68
106	94	139	76	83	78	35	75	72	120	174	101	33	39	39	69
126	106	127	89	99	85	77	76	73	73	83	72	49	67	34	70
42	38	44	31	32	30	20	22	27	24	36	29	24	23	15	71
83	73	83	58	67	55	57	54	46	49	47	43	25	44	19	72
9	6	3	13	10	2	7	6	7	9	6	3	2	10	2	73
1,553	1,380	1,448	1,199	1,075	1,085	942	996	844	944	1,023	985	809	686	647	74

Table 87.—*Important diseases and groups of diseases registered in Michigan periods, 1870-94, showing death-rates per 100,000 population, and*

Line number.	Causes of death, 1870-94.	Rates per 100,000 population.						
		Year, 1894.	Year, 1893.	Five years, 1890 to 1894.	Five years, 1885 to 1889.	Five years, 1880 to 1884.	Five years, 1875 to 1879.	Five years, 1870 to 1874.
1	TOTAL DEATHS.....	935.0	997.1	1,000.0	976.8	993.8	870.6	963.0
2	SPECIFIED DISEASES.....	757.3	812.4	813.6	812.8	814.9	682.2	788.6
3	<i>Dangerous Commu- nicable Diseases.....</i>	195.7	229.2	229.4	252.3	311.4	261.9	296.9
4	{ Consumption.....	98.4	97.7	98.8	106.5	112.0	106.5	112.1
5	{ <i>Other tubercular diseases.....</i>	10.1	8.9	9.8	7.0	9.0	8.5	11.0
6	Marasmus.....	4.1	4.0	4.2	1.9	1.9	.5	.3
7	Meningitis, Tuber.....	1.8	1.7	1.7	2.3	2.9	3.8	5.6
8	Scrofula.....	1.0	1.0	1.0	1.3	1.8	2.2	3.3
9	Tabes mesenterica.....	2.5	1.2	1.6	1.2	1.8	1.3	1.3
10	{ Other forms of tuberculosis..... }	.6	1.0	.8	.5	.6	.7	.6
11	Croup.....	6.1	9.8	11.3	16.3	16.6	12.0	11.4
12	Croup, Membranous.....	2.0	1.9	2.4	4.1	3.0	1.8	.6
13	Diphtheria.....	28.6	43.5	45.6	47.4	81.3	47.2	13.9
14	Erysipelas.....	1.9	2.6	2.5	3.4	4.7	5.8	9.1
15	Fever, Puerperal.....	1.5	1.9	1.7	1.9	2.3	2.1	3.4
16	Fever, Scarlet.....	7.3	16.3	14.6	14.6	26.9	27.9	49.8
17	Fever, Typhoid.....	23.9	31.3	27.7	29.7	32.3	27.3	45.1
18	Fever, Typho-mal.....	1.0	1.3	1.1	1.6	1.5	.5	.2
19	Fever, Typhus.....	.1	.2	.3	.2	.6	1.0	1.2
21	Measles *.....	3.8	5.8	6.8	9.8	10.7	6.7	9.5
23	Small-pox.....	3.8	.1	.9	.2	2.2	2.9	7.9
24	Chicken-pox.....	.2	.1	.2	.1	.1	.1	.1
25	Whooping-cough.....	7.0	7.8	6.6	7.5	8.5	9.5	11.8
26	Bladder diseases.....	1.9	1.9	1.8	2.0	1.9	2.5	2.7
27	Calculus.....	.6	.5	.5	.7	.9	1.5	1.8
28	Cystitis.....	1.1	1.1	.9	.9	.7	.6	.6
29	Bladder disease, etc.....	.2	.3	.4	.4	.3	.3	.3
30	Bowel diseases.....	91.9	92.3	87.4	87.8	93.2	74.5	109.4
31	Bowels, Inflam'tion of.....	17.7	19.6	16.9	17.5	17.5	15.3	17.5
32	Diarrhea.....	10.4	16.8	13.8	19.0	20.0	17.2	29.0
33	Cholera infantum.....	39.7	37.8	34.3	31.7	34.7	20.7	20.5
34	Dysentery.....	4.5	3.6	4.3	7.7	9.2	11.7	25.8
35	Peritonitis.....	4.6	3.8	4.5	1.9	1.1	.7	.6
36	Bowel disease, etc.....	15.0	10.7	13.5	10.0	10.8	8.8	16.1

NOTE.—The line numbers in this table correspond to the same diseases in Tables 84, 85 and 86. A few diseases, e. g., German measles, which was not separately compiled until 1892, do not appear, being included under the titles beneath which they were formerly compiled.

during the year 1894, compared with 1893, and with five successive quinquennial proportional deaths per 1,000 deaths from specified diseases.

Rates per 1,000 deaths from specified diseases.							Line number.
Year, 1894.	Year, 1893.	Five years, 1890 to 1894.	Five years, 1885 to 1889.	Five years, 1880 to 1884.	Five years, 1875 to 1879.	Five years, 1870 to 1874.	
1,234.7	1,227.3	1,229.1	1,201.8	1,219.5	1,276.1	1,221.2	1
1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	2
259.4	262.1	262.4	310.4	362.6	363.8	363.8	3
130.0	120.8	121.4	133.5	137.5	159.0	142.2	4
13.4	10.9	11.4	8.7	11.1	12.5	14.0	5
5.4	5.0	5.2	2.3	2.4	.7	.4	6
2.4	2.1	2.0	2.8	3.5	5.6	7.2	7
1.4	1.2	1.2	1.6	2.3	3.1	4.1	8
3.4	1.5	2.0	1.4	2.2	1.9	1.6	9
.8	1.2	1.0	.6	.8	1.1	.7	10
8.0	12.1	13.9	20.1	20.3	17.6	14.5	11
2.6	2.3	2.9	5.0	3.7	2.7	.8	12
37.8	53.5	56.1	58.3	99.8	69.2	17.6	13
2.5	3.2	3.1	4.2	5.8	8.5	11.5	14
2.0	2.3	2.0	2.3	2.8	3.1	4.3	15
9.6	20.1	18.0	18.0	33.0	41.0	63.1	16
31.6	38.5	34.0	36.5	39.6	40.1	57.2	17
1.3	1.6	1.3	2.0	1.8	.7	.2	18
.1	.2	.3	.2	.8	1.5	1.5	19
5.1	7.1	8.4	12.1	13.1	9.8	12.0	21
5.0	.2	1.1	.2	2.7	4.2	10.0	23
.2	.1	.2	.1	.1	.2	.1	24
9.3	9.6	8.1	9.3	10.5	13.9	14.9	25
2.5	2.3	2.3	2.5	2.3	3.7	3.4	26
.8	.6	.6	.9	1.1	2.3	2.3	27
1.5	1.4	1.1	1.1	.8	.9	.7	28
.3	.3	.5	.5	.4	.4	.4	29
121.4	113.6	107.4	103.0	114.4	109.1	133.8	30
23.3	24.2	20.8	21.6	21.5	22.4	22.2	31
13.8	20.7	17.0	23.4	24.5	25.2	36.8	32
52.5	46.5	42.2	39.0	42.6	30.3	26.0	33
5.9	4.4	5.3	9.4	11.2	17.2	32.7	34
6.0	4.6	5.6	2.3	1.3	1.1	.8	35
19.9	13.2	16.6	12.3	13.2	12.9	20.4	36

* Includes German measles.

Table 87.—CONCLUDED.—Important diseases and groups of diseases

Line number.	Causes of death, 1870-94.	Rates per 100,000 population.					
		Year, 1894.	Year, 1893.	Five years, 1890 to 1894.	Five years, 1885 to 1889.	Five years, 1880 to 1884.	Five years, 1875 to 1879.
37	Brain diseases.....	81.6	77.5	75.9	74.0	71.8	68.2
38	Apoplexy.....	12.6	10.9	10.2	7.4	6.2	5.4
40	Brain, Inflammation of.....	18.5	18.9	14.2	17.2	17.6	21.8
41	Epilepsy.....	2.2	3.0	2.5	2.6	2.8	2.1
42	Meningitis.....	8.1	7.8	8.2	9.1	13.6	8.6
43	Paralysis.....	31.5	30.0	23.6	24.8	18.8	15.5
44	Brain disease, etc.*.....	13.7	11.9	12.3	13.0	12.4	13.5
45	Cancer.....	30.2	29.2	27.2	22.5	18.8	16.8
46	Tumor.....	6.6	7.1	6.7	5.1	4.3	3.5
47	Childbirth.....	9.5	10.1	10.4	12.1	12.6	12.1
48	Convulsions.....	18.4	23.6	21.9	23.6	20.9	18.8
49	Diabetes.....	4.7	5.0	3.9	3.4	2.9	2.3
50	Dropsy.....	17.8	20.2	19.0	18.3	17.1	16.6
51	Fever (unspecified).....	3.3	4.5	4.9	6.2	8.8	9.0
52	Fever, Malarial.....	4.1	5.5	5.9	8.9	10.5	8.3
53	Heart diseases.....	62.1	64.8	61.6	49.0	38.4	29.7
54	Pericarditis.....	3.9	3.6	3.7	3.9	4.3	4.5
55	Heart disease, etc.†.....	58.1	61.2	57.9	44.0	34.1	25.2
57	Influenza.....	17.9	25.2	37.1	1.9	.1	.2
58	Kidney diseases.....	24.5	21.7	20.4	16.7	12.3	6.1
59	Kidneys, Inflammat'n of.....	18.4	17.0	14.9	11.9	8.5	2.7
60	Kidney disease, etc.....	6.0	4.7	5.4	4.9	3.8	3.4
61	Liver disease, etc.....	7.2	7.5	7.0	7.6	8.1	8.4
62	Lung diseases.....	75.4	84.6	81.3	75.1	70.7	65.9
63	Asthma.....	3.3	3.6	3.4	3.1	2.8	1.9
64	Bronchitis.....	7.8	8.3	8.0	6.6	4.5	3.0
65	Pleurisy.....	1.3	1.3	1.3	1.3	1.1	1.1
66	Pneumonia.....	53.5	62.8	58.6	51.4	50.0	46.4
68	Lung disease, etc.‡.....	9.5	8.7	10.0	12.6	12.3	13.6
69	Rheumatism.....	6.7	6.4	6.5	7.3	6.4	4.9
70	Septicemia.....	6.9	8.0	7.6	7.3	4.1	.4
71	Spine disease, etc.....	4.6	4.8	4.8	5.6	6.1	5.3
72	Stomach diseases.....	11.1	10.6	9.4	7.4	6.5	5.5
73	Stomach, Inflammat'n of.....	3.5	2.9	2.5	2.0	2.2	1.8
74	Stomach disease, etc.....	7.6	7.7	6.9	5.4	4.4	3.8
75	Syphilis.....	1.2	1.0	.6	.5	.5	.4
76	Unclassified.....	73.9	71.7	82.6	119.2	87.5	65.8

* Includes congestion of brain.

† Includes "Heart failure."

‡ Includes congestion of lungs.

registered in Michigan during the year 1894, compared with 1893.

Rates per 1,000 deaths from specified diseases.							Line number.
Year, 1894.	Year, 1893.	Five years, 1890 to 1894.	Five years, 1885 to 1889.	Five years, 1880 to 1884.	Five years, 1875 to 1879.	Five years, 1870 to 1874.	
107.7	95.4	93.3	91.1	87.5	92.7	102.2	37
16.7	13.4	12.6	9.1	7.6	9.6	6.8	38
17.8	17.1	17.4	21.1	21.7	24.6	27.7	40
2.8	3.7	3.1	3.2	3.4	3.4	2.7	41
10.7	9.6	10.0	11.2	16.7	12.6	28.0	42
41.6	37.0	35.1	30.5	23.1	22.8	15.3	43
18.1	14.6	15.1	16.0	15.2	19.7	21.7	44
39.9	36.0	33.4	27.7	23.1	24.7	14.5	45
8.8	8.7	8.2	6.2	5.3	5.1	3.4	46
12.5	12.4	12.8	14.9	15.5	17.8	20.5	47
24.3	29.0	26.9	29.0	25.6	27.5	28.2	48
6.2	6.2	4.8	4.2	3.5	3.4	3.1	49
23.6	24.9	23.3	22.5	21.0	24.4	25.2	50
4.4	5.6	6.1	7.6	10.8	13.2	20.0	51
5.4	6.8	7.3	11.0	12.9	12.1	17.5	52
81.9	79.8	75.7	59.0	47.1	43.5	35.8	53
5.2	4.5	4.6	4.8	5.3	6.6	5.8	54
76.8	75.3	71.2	54.2	41.8	36.9	29.9	55
23.7	31.0	45.6	2.3	.1	.3	.4	57
32.3	26.7	26.1	20.6	15.1	9.0	5.9	58
24.4	20.9	18.4	14.6	10.4	3.9	2.5	59
8.0	5.8	6.7	6.0	4.7	5.0	3.4	60
9.5	9.3	8.6	9.4	9.9	12.3	12.1	61
99.6	104.2	99.9	92.4	96.8	96.6	91.8	62
4.4	4.4	4.2	3.9	3.4	2.8	2.1	63
10.3	10.2	9.8	8.1	5.6	4.3	2.3	64
1.7	1.6	1.6	1.6	1.4	1.7	1.5	65
70.7	77.3	72.1	63.3	61.3	63.0	66.9	66
12.5	10.7	12.2	15.5	15.1	19.8	18.9	68
8.9	7.9	7.9	9.0	7.9	7.2	6.8	69
9.1	9.9	9.4	9.0	5.0	.6	.1	70
6.1	5.9	5.9	6.9	7.5	7.8	9.4	71
14.7	13.0	11.6	9.1	7.9	8.1	6.9	72
4.7	3.6	3.1	2.5	2.7	2.6	2.7	73
10.0	9.4	8.4	6.6	5.3	5.5	4.2	74
1.5	1.2	.8	.6	.6	.6	.6	75
97.6	88.2	101.5	146.7	107.4	96.5	89.5	76

Table 88.—Death-rates per 100,000 population from certain important dangerous communicable diseases, cancer, pneumonia and influenza for each of the years 1869-94, inclusive. (See Diagram II, opposite.)

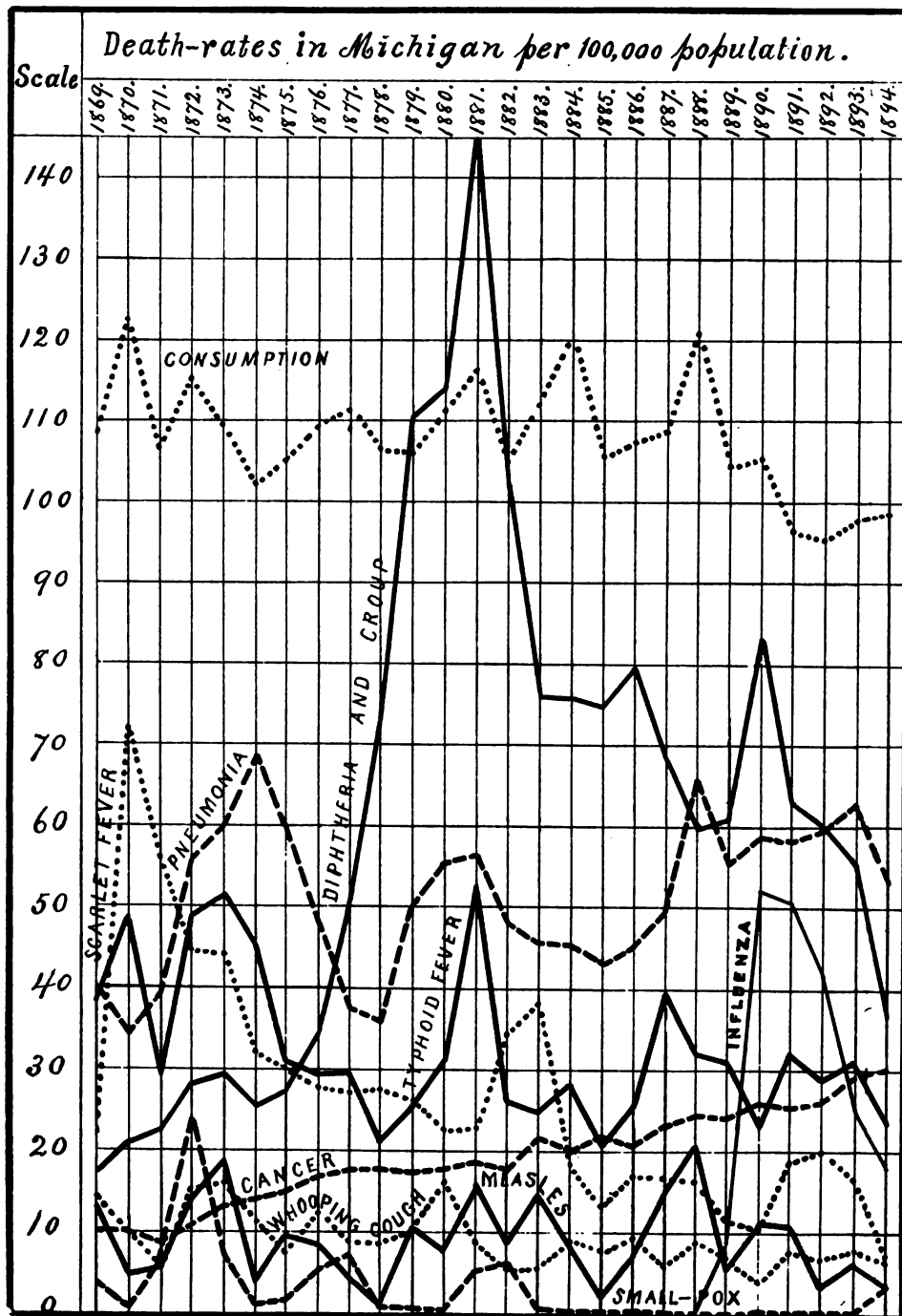
Years.	Dangerous communicable diseases.	Consumption.	Diphtheria and croup.	Scarlet fever.	Typhoid fever.	Measles.	Small-pox.	Whooping-Cough.	Cancer.	Pneumonia.	Influenza.
1869....	231.9	108.1	17.0	22.1	38.8	12.9	3.7	13.9	9.9	39.9	-----
1870*.	300.7	122.5	20.9	72.0	48.5	4.7	0.8	10.1	10.1	34.2	-----
1871....	250.7	106.0	22.5	56.6	29.0	5.5	6.0	5.5	8.5	39.2	.2
1872....	318.9	115.1	28.2	44.3	48.7	14.1	23.7	15.1	10.4	55.0	.5
1873....	305.1	109.6	29.6	43.9	51.3	18.6	7.0	15.6	13.0	60.1	.9
1874....	243.8	102.0	26.2	32.2	44.8	3.4	1.3	11.2	13.8	68.6	.1
1875 ..	232.0	104.9	26.9	30.0	30.7	9.5	1.8	7.2	14.4	60.0	.4
1876....	245.1	109.2	34.7	27.4	29.3	8.1	5.2	12.4	16.5	47.7	-----
1877....	255.3	110.9	50.6	26.9	29.7	4.1	6.8	8.7	17.7	37.2	.1
1878....	253.4	106.1	72.8	27.7	21.3	1.0	0.4	8.5	17.4	35.7	.2
1879....	305.2	105.6	110.5	26.3	24.9	10.5	0.4	10.2	17.1	49.9	.3
1880*.	321.5	111.7	113.9	22.7	31.3	7.6	0.2	16.1	17.4	56.2	.2
1881....	388.2	116.1	145.2	22.8	52.5	15.2	4.9	8.4	18.4	55.9	.1
1882....	305.5	104.4	102.1	34.3	26.8	8.7	5.8	5.0	17.4	48.3	.1
1883....	286.4	112.3	75.7	37.9	24.7	14.5	0.3	5.2	21.6	46.6	.1
1884....	277.7	120.8	76.4	17.9	28.2	7.9	0.2	8.8	19.9	46.2	-----
1885....	237.5	105.3	74.6	13.1	20.7	2.0	0.2	7.4	21.6	43.1	.1
1886....	260.4	107.3	79.4	16.7	26.1	6.8	0.3	9.7	20.5	44.8	.2
1887....	268.3	108.7	68.2	16.3	39.3	14.6	-----	5.6	23.2	49.6	.1
1888....	273.8	121.0	59.8	16.1	31.9	20.6	0.2	8.7	24.0	65.6	.1
1889....	232.5	104.3	61.1	11.7	31.1	5.1	0.1	6.8	24.0	55.3	8.6
1890*.	250.9	105.4	83.0	10.6	22.2	10.9	0.3	3.6	25.5	58.5	51.8
1891....	242.1	96.3	63.0	18.7	32.0	10.5	0.1	7.4	25.0	58.3	50.5
1892....	230.1	95.2	60.0	20.2	28.6	3.3	0.1	6.7	25.5	59.4	41.8
1893....	229.2	97.7	55.2	16.3	31.3	5.8	0.1	7.8	29.2	62.8	25.2
1894*.	195.7	98.4	36.7	7.3	23.9	3.8	3.8	7.0	30.2	53.5	17.9

* Census years. United States censuses only were used in the preparation of this table for the years 1869-90. The rates would not be materially changed by employing the State censuses of 1874 and 1884.

Certain diseases are of so much importance that five-year averages do not seem to be sufficient for their satisfactory study. We wish to know not only their general tendency, but also just how each one has fluctuated from year to year. For this reason, Table 88 gives the annual rates for certain important diseases, and the figures therein contained are also represented graphically in the diagram facing it.

Tables 84 to 88, inclusive, form the chief basis for the remarks relating to diseases returned as causes of death in Michigan during the year 1894. This discussion begins on page 271, reference being made to the data contained in these tables by means of the reference line numbers. Before beginning the subject of individual causes of death, certain tables showing the geographical distribution of diseases during the year 1894 will be presented.

DIAGRAM II.—COMPARATIVE MORTALITY FROM CERTAIN IMPORTANT DISEASES IN MICHIGAN FOR TWENTY-SIX YEARS, 1869-94.



See Table 88 on opposite page.

Table 89.—*Geographical divisions of the State used in the study of causes of death.*

I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.
Upper Peninsular.	North- western.	Northern.	Northeastern.	Western.	North- central.	Eastern.	Central.	South- western.	South- central.	South- eastern.
Alger.	Benzie.	Antrim.	Alcona.	Kent.	Clare.	Arenac.	Barry.	Allegan.	Branch.	Macomb.
Baraga.	G'd Traverse.	Charlevoix.	Alpena.	Lake.	Gladwin.	Bay.	Clinton.	Berrien.	Calhoun.	Monroe.
Chippewa.	Leelanau.	Cheboygan.	Iosco.	Mason.	Isabella.	Huron.	Eaton.	Cass.	Hillsdale.	Oakland.
Delta.	Manistee.	Crawford.	Montmorency.	Muskegon.	Macosta.	Lapeer.	Genesee.	Van Buren.	Jackson.	Wayne.
Dickinson.	†Manitou.	Emmet.	Ogemaw.	Newaygo.	Midland.	Saginaw.	Gretiot.		Kalamazoo.	
Gogebic.	Wexford.	Kalkaska.	Oscoda.	Oceana.	Missaukee.	Sanilac.	Ingham.		Lenawee.	
Houghton.		Otsego.	Presque Isle.	Ottawa.	Oscola.	St. Clair.	Ionia.		St. Joseph.	
Iron.					Roscommon.	Tuscola.	Livingston.		Washtenaw.	
*Isle Royal.							Montcalm.			
Keweenaw.							Shiawassee.			
Luce.										
Mackinac.										
Marquette.										
Menominee.										
Ontonagon.										
Schoolcraft.										

* Not organized.

† Disorganized by act of the legislature of 1886, the islands of which it was constituted being divided between the counties of Charlevoix and Leelanau.

GEOGRAPHICAL DISTRIBUTION OF DISEASES IN MICHIGAN, 1894.

Table 89 shows the counties contained in each geographical division of the State, as subdivided for the purpose of more conveniently studying the distribution of causes of death. This arrangement has been in use in these reports from an early date and much valuable information has been accumulated in connection with it in regard to the distribution of diseases. Maps showing the distribution of the mortality from typhoid fever, consumption and diphtheria in Michigan, are given in the last two reports of this series, and may be referred to for the geographical location of these divisions.

The age-distribution of the inhabitants of the several divisions varies widely, and is of importance in considering the distribution of certain diseases. In Table 90 the number and per cent of total deaths of children under five years of age and of persons aged seventy years and over are given. It is evident that a portion of the State, like the Upper Peninsular Division, with 54.6 per cent of all decedents under 5 years of age, would have a larger proportion of deaths from children's diseases such as scarlet fever, measles and diphtheria, than a division like the South-central, which reports only 19.4 per cent of its decedents under 5 years of age. Of course the number of children in the population is relatively larger in the Upper Peninsular Division than it is in the South-central Division, so that whether the death-rate of children under five is really larger in the one than in the other does not appear at this point. On a previous page* the death-rates of infants under 1 year of age and of children under 5 years of age are given for all of the counties of the State, and reference to these statements will give more satisfactory information than can be derived from any statements of percentage of deaths like those given in Table 90.

Table 90.—Comparison, by geographical divisions, of the number and percentage of deaths returned in 1894 from "old age," and of persons aged over 70 years and under 5 years.

State and geographical divisions.	Deaths at all ages, 1894.	"Old age."		Aged 70 and over.		Aged under 5.	
		Number of deaths, 1894.	Per cent of deaths at all ages.	Number of deaths, 1894.	Per cent of deaths at all ages.	Number of deaths, 1894.	Per cent of deaths at all ages.
State.....	20,959	748	3.6	3,376	16.1	7,020	33.5
Upper Peninsular.....	2,040	28	1.3	65	3.2	1,114	54.6
Northwestern.....	779	17	2.2	88	10.7	319	40.9
Northern.....	495	12	2.4	49	9.9	193	39.0
Northeastern.....	348	9	2.6	26	7.5	158	45.4
Western.....	2,354	75	3.2	352	15.0	822	34.9
North-central.....	721	20	2.8	80	11.1	266	36.9
Eastern.....	2,889	89	3.1	365	12.6	1,068	37.0
Central.....	2,638	113	4.3	590	22.4	623	23.6
Southwestern.....	1,264	66	5.2	320	25.3	306	24.2
South-central.....	2,920	168	5.8	808	27.5	566	19.4
Southeastern.....	4,511	153	3.4	643	14.3	1,585	35.1

* See page 212, preceding.

Table 91.—Comparison, by geographical divisions, of the number and percentage of deaths in 1894 from certain specified causes: Consumption, pneumonia, influenza, diphtheria, croup, scarlet fever, typhoid fever, diarrheal diseases.

State and geographical divisions.	Deaths from all causes, 1894.	Consumption.		Pneumonia.*		Influenza.		Diphtheria.		Croup.†		Scarlet fever.		Typhoid fever.		Diarrheal diseases.‡	
		Num-ber of deaths.	Per cent of deaths from all causes.	Num-ber of deaths.	Per cent of deaths from all causes.	Num-ber of deaths.	Per cent of deaths from all causes.	Num-ber of deaths.	Per cent of deaths from all causes.	Num-ber of deaths.	Per cent of deaths from all causes.	Num-ber of deaths.	Per cent of deaths from all causes.	Num-ber of deaths.	Per cent of deaths from all causes.	Num-ber of deaths.	Per cent of deaths from all causes.
State	20,959	2,208	10.5	1,200	5.7	402	1.9	642	3.1	180	.9	163	.8	536	2.6	1,225	5.8
Upper Peninsular	2,040	135	7.6	109	5.3	18	.9	33	1.6	44	2.2	29	1.4	66	3.2	179	8.8
Northwestern	779	89	11.4	50	6.4	12	1.5	16	2.1	3	.4	7	.9	23	3.3	55	7.1
Northern	495	60	12.1	27	5.5	18	3.6	31	6.3	1	.2	2	.4	5	1.0	42	8.5
Northeastern	348	31	8.9	13	3.7	5	1.4	7	2.0	3	.9	5	1.4	2	.6	10	2.9
Western	2,354	273	11.6	147	6.2	29	1.2	52	2.2	17	.7	17	.7	79	3.4	152	6.5
North-central	721	80	11.1	43	6.0	16	2.2	18	2.5	9	1.2	8	1.1	22	3.1	57	7.9
Eastern	2,899	331	11.5	146	5.1	68	2.4	143	5.1	27	.9	22	.8	75	2.6	181	6.3
Central	2,638	232	10.7	127	4.8	61	2.3	76	2.9	15	.6	21	.8	71	2.7	134	5.1
Southwestern	1,264	140	11.1	74	5.9	23	2.0	9	.7	4	.3	3	.2	35	2.8	65	5.1
South-central	2,620	323	11.1	153	5.4	77	2.6	46	1.6	11	.4	24	.8	66	2.3	107	3.7
Southeastern	4,511	442	9.8	306	6.8	73	1.6	206	4.6	46	1.0	23	.6	89	2.0	243	5.4

* Includes 36 cases of typhoid pneumonia, 6 cases of pleuro-pneumonia, and 5 cases of capillary bronchitis.

† Includes 44 cases of membranous croup, specified as such.

‡ Includes diarrhoea, dysentery, cholera infantum.

Table 92.—Deaths and death-rates per 100,000 population, by geographical divisions, for certain important diseases and groups of diseases in Michigan during the year 1894.

State and geographical divisions.	Popula- tion, June 1, 1894.	All causes.		Dangerous communi- cable diseases.		Consump- tion.		Diphtheria and croup.		Scarlet fever.		Typhoid fever.	
		Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.
State	2,241,641	20,959	935.0	4,387	195.7	2,206	98.4	822	36.7	163	7.3	536	23.9
Upper Peninsular..	206,590	2,040	987.5	400	193.6	155	75.0	77	37.3	29	14.0	66	31.9
Northwestern.....	76,052	779	1,024.3	159	209.1	89	117.0	19	25.0	7	9.2	26	34.2
Northern.....	60,778	495	814.4	107	176.1	60	98.7	32	52.7	2	3.3	5	8.2
Northeastern.....	51,268	348	678.8	56	109.2	31	60.5	10	19.5	5	9.8	2	3.9
Western.....	258,388	2,354	911.0	489	189.3	273	105.7	69	26.7	17	6.6	79	30.6
North-central.....	93,349	721	772.4	153	163.9	80	85.7	27	28.9	8	8.6	22	23.6
Eastern.....	333,907	2,889	865.2	690	206.6	331	99.1	175	52.4	22	6.6	75	22.5
Central.....	313,866	2,638	840.5	531	169.2	282	89.8	91	29.0	21	6.7	71	22.6
Southwestern.....	137,059	1,264	922.2	225	164.2	140	102.1	13	9.5	3	2.2	35	25.5
South-central.....	309,679	2,920	942.9	521	168.2	323	104.3	57	18.4	24	7.7	66	21.3
Southeastern.....	400,705	4,511	1,125.8	1,056	263.5	442	110.3	252	62.9	25	6.2	89	22.2

State and geographical divisions.	Meas- les.		Whoop- ing cough.		Bowel diseases.		Brain diseases.		Cancer and tumor.		Heart dis- eases.*		Lung diseases.†		Violence.	
	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.	Deaths, 1894.	Rate per 100,000.
State	84	3.7	158	7.0	2,060	91.9	1,829	81.6	826	36.8	986	44.0	1,690	75.4	1,213	54.1
Upper Peninsular..	8	3.9	50	24.2	259	125.4	81	39.2	53	25.7	47	22.7	178	86.2	185	89.5
Northwestern.....			5	6.6	105	138.1	62	81.5	16	21.0	33	43.4	76	99.9	61	80.2
Northern.....	3	4.9	3	4.9	59	97.1	29	47.7	13	21.4	19	31.3	37	60.9	22	36.2
Northeastern.....	1	2.0	2	3.9	33	64.4	16	31.2	9	17.6	19	37.1	20	39.0	33	64.4
Western.....	8	3.1	15	5.8	244	94.4	193	74.7	91	35.2	118	45.7	209	80.9	179	69.3
North-central.....			8	8.6	83	88.9	53	56.8	22	23.6	25	26.8	56	60.0	34	36.4
Eastern.....	12	3.6	29	8.7	304	91.0	190	56.9	98	29.3	124	37.1	229	68.6	137	41.0
Central.....	8	2.5	13	4.1	239	76.1	316	100.7	130	41.4	167	53.2	183	58.3	114	36.3
Southwestern.....	7	5.1	10	7.3	108	78.8	139	101.4	62	45.2	74	54.0	95	69.3	68	49.6
South-central.....	4	1.3	8	2.6	233	75.2	347	112.1	166	53.6	179	57.8	204	65.9	143	46.2
Southeastern.....	33	8.2	15	3.7	393	98.1	403	100.6	166	41.4	181	45.2	403	100.6	237	59.1

* Not including "heart failure."

† Not including consumption

Tables 84, 85 and 86, the principal tables relating to diseases returned as causes of death for the year 1894, together with comparative statistics for previous years in the latter, are presented in the same form as in the reports of the last two years. It should be remembered that these tables pertain only to specified diseases returned as causes of deaths; the deaths from violence are considered in another series of tables (Tables 99, 100 and 101).

Table 87 is inserted for the first time in the present report. It gives statements of death-rates per 100,000 population, and also proportional deaths per 1,000 specified diseases, for each of the causes and groups of causes given in the previous tables for the years 1893 and 1894, and also for five successive quinquennial periods embraced between the years 1870-94. It thus shows, in a very condensed form, just how each disease has varied in importance as a cause of death during practically the entire period of registration in Michigan.

Table 91 states the number and percentage (to all causes) of deaths from certain important diseases in the several geographical divisions. Table 92 contains a somewhat different list of diseases, together with groups of diseases arranged according to the parts of the body affected. In the latter table rates per 100,000 population are given instead of per cents to total deaths. Such rates are very much more reliable for comparison. The data contained in these tables will be discussed in the text immediately following, each special disease and group of diseases being taken up in the order indicated by the line numbers in Tables 84-86.

DISCUSSION OF DISEASES RETURNED AS CAUSES OF DEATH IN MICHIGAN, 1894.

The following remarks on this subject are based chiefly on Tables 84 to 87 inclusive, to which reference may be conveniently made by means of the line numbers, prefixed to the title of each cause of death in the following text. Table 84 gives the distribution of deaths from each cause by sex, months of the year, and periods of age of the decedents; Table 85 presents the same list of causes of death according to their occurrence by counties; Table 86 shows the number of deaths registered from each disease for previous years of registration, while Table 87 reduces the evidence presented in Table 86 to a more compact and comparable form by means of death-rates and five-year averages. Finally, Table 88 traces the fluctuations of individual diseases from year to year (see diagram on opposite page to table), and other tables following, to which casual reference will be made, illustrate the geographical distribution of fatal diseases through the State.

The classification of Tables 84 to 87 is the provisional one employed in these reports since 1892*. While it was designed merely for use until a satisfactory nomenclature shall be authoritatively introduced and adopted by American registrars, it is gratifying to know that it has proved much more convenient for use in setting forth the data than the old classification employed, and its directness and lack of theoretical groupings render it more suitable for general reference by readers not thoroughly acquainted with nosological details. Many indefinite terms appear in the list, such as "heart failure," "convulsions," and "dropsy." These are necessary imperfections of the returns of causes of death under the Michigan system, and must be reckoned with in considering the probable accuracy of statements of more definite character. The general character of the arrangement employed is given in the following outline:

* See Mich. Reg. Rep., 1892, p. 184. Also *Public Health* (Reports and Papers of the American Public Health Association), Vol. XX, p. 536.

**TOTAL DEATHS
FROM
ALL CAUSES:**

A. DEATHS FROM DISEASE:

1. **Dangerous communicable diseases,*** as defined by the Michigan State Board of Health for restrictive purposes:—Consumption, diphtheria, typhoid fever, scarlet fever, measles, whooping-cough, small-pox, etc.
2. Diseases not defined, at present, as dangerous communicable diseases (although some of them will undoubtedly be so defined in future, *e. g.*, pneumonia). The miscellaneous list of diseases in this group contains many of indefinite character; for convenience certain sub-groups are distinguished with reference to the part of the body affected, as *heart diseases, brain diseases*, etc.

B. DEATHS FROM VIOLENCE:

1. Accidental.
2. Homicidal.
3. Suicidal.

C. DEATHS OF UNCERTAIN CHARACTER (AS TO WHETHER FROM DISEASE OR VIOLENCE):

1. Cause entirely unknown or unspecified.
2. Still-births.
3. Premature births.

It will be observed that Tables 84 to 87 pertain entirely to deaths from disease. Deaths from violence are studied in Tables 99 to 101, while still-births are treated, for the most part, in Part II, in connection with births. As a basis of reference for percentage comparisons of deaths from particular diseases, the total number of deaths from disease is obviously more proper than the aggregate number of deaths from disease, violence and unknown causes.

DEATHS FROM ALL CAUSES AND FROM SPECIFIED DISEASES.

(1) TOTAL DEATHS.....	20,959	The gross number of deaths recorded in Michigan for the year 1894 amounted to 20,959, of which number 16,975 were ascribed to various diseases. This latter number is accordingly taken as the basis of reference to which percentage comparisons of the deaths from any particular cause should be referred, as stated in Table 87. While it is manifestly improper to employ the total number of deaths, containing as it does such a large portion of deaths from unknown causes, as the basis from which the proportion of deaths from any specified cause may be estimated, it is evident that the gross number of deaths is perfectly comparable with the total deaths registered for previous years, in which the same indefinite returns are included. For such comparisons, see the table of death-rates for each year of registration in a previous part of this report (Table 8, Part I). In the preceding section of this part of the report the incidence of deaths from all causes has been carefully studied with reference to months of death, sex, age of decedents, etc. The results there presented may be compared with the corresponding data for individual diseases as given in the present section. It may be noted that Table 68
(2) SPECIFIED DISEASES	16,975	
Violence.....	1,213	
Still-births	1,002	
Premature births.....	81	
Unknown cause of death	1,688	

* Diseases of this group are placed first in the tables, and are distinguished from those of the following group by being printed in full-face type. As the total of dangerous communicable diseases would seem likely to become a valuable criterion of sanitary efficiency, the title is introduced into the tabular list.

(illustrated by Diagram I) is of especial interest in connection with the study of causes of death from the fact that different diseases hold the leading roles as factors of mortality at the various age-periods. Thus a rapid increase in infant mortality may mean a higher death-rate from cholera infantum. The recent high death-rate of the aged in Michigan was due to epidemic influenza and its sequelæ. While it is necessary to study different phases of the mortality of the State under different headings and in different sections of the report, the whole matter is coherent, and constant cross references are needed for full comprehension of the subject.

Deaths from specified diseases, as indicated in the preceding outline of classification, are divided for present purposes of study into two groups: (1) Dangerous communicable diseases, and (2) Diseases not so classed at present. The former group is of the greatest practical sanitary interest, and will be given first attention.

DANGEROUS COMMUNICABLE DISEASES.

(3) <i>Dangerous Communicable Diseases</i>	4,387	While all diseases that cause death
{ (4) <i>Consumption</i>	2,206	are dangerous, and all of the specific
{ (5) <i>Other tubercular diseases</i>	227	infectious diseases are, under proper
(6) <i>Marasmus</i>	92	conditions, communicable, this group
(7) <i>Tubercular meningitis</i>	41	does not exactly correspond, for the
(8) <i>Scrofula</i>	23	purposes of the present report, with
(9) <i>Tabes mesenterica</i>	57	the class of specific infectious diseases.
(10) <i>Other forms of tuberculosis</i>	14	For reasons already stated, it seems
{ (11) <i>Croup</i>	136	desirable to make a practical division
{ (12) <i>Membranous croup</i>	44	in the arrangement of causes of death
{ (13) <i>Diphtheria</i>	642	in this report based on the efforts at
(14) <i>Erysipelas</i>	43	prevention and restriction of certain
(15) <i>Puerperal fever</i>	33	diseases by the Michigan State Board
(16) <i>Scarlet fever</i>	163	of Health. This list, therefore, con-
{ (17) <i>Typhoid fever</i>	536	tains only such diseases (with one
{ (18) <i>Typho-malarial fever</i>	22	trifling exception) as have been put
{ (19) <i>Typhus fever</i>	2	under ban by the health service of the
(20) <i>Glanders</i>.....	.....	State, and will hence be of special
(21) <i>Measles</i>	84	value as an index of the efficiency of
(22) <i>German measles</i>	2	the restrictive and preventive methods
(23) <i>Small-pox</i>	85	adopted.
(24) <i>Chicken-pox</i>	4	
(25) <i>Whooping-cough</i>	158	

The diseases in this group have been under sanitary supervision in Michigan for different periods of time. The State Board of Health was established in 1873, and began its first warfare upon small-pox, cholera,* scarlet fever, typhoid fever, measles and whooping-cough in the same year. Diphtheria was just beginning its devastating course in the State, and was not at the time recognized as of much importance. Physicians made it a point of honor to report only the distinctly marked cases, with formation of pseudo-membranes, as such, and the infectious character of the disease was then a subject of considerable doubt. Practical experience of the disease, which rapidly increased in prevalence during the immediately following years, soon caused it to be included in the list of diseases dangerous to the public health (1875), and the treatment of cases of "membranous croup" as identical for all practical sanitary purposes with diphtheria is a recent step (1889), due chiefly to the teachings of bacteriology. Consumption has been added to the list of restricted diseases still more recently (1893), and with it is included the mis-

* There have probably been no cases, certainly there has been no epidemic, of Asiatic cholera in Michigan since the establishment of the Board.

cellaneous group of affections compiled, with more or less certainty, as caused by the tubercle bacillus.

In Table 86 the deaths reported from each of the diseases of this group may be found stated for each of the years 1869-94, inclusive, thus giving a bird's-eye view of the history of the most important preventable causes of mortality in Michigan. As the population of the State has increased largely during the period of 26 years (from 1,184,059 in 1870 to 2,241,641 in 1894), it is evident that allowance must be made for such increase if we are to know the relative prevalence in recent years as compared with early years. Table 87 may be consulted for this purpose, the rates there given being carefully computed to estimated populations for each group of years. The use of five-year averages enables the data to be expressed in greatly reduced space, and yet indicates the general course of registration with perfect accuracy. For certain purposes, however, it may be desirable to employ the death-rates for each year of registration, and accordingly the rates of the most important causes of deaths are given in Table 88 and illustrated graphically in Diagram II.

The general death-rate in Michigan from dangerous communicable diseases during the year 1894 was the lowest in the history of the State registration, being only 195.7 per 100,000 population. Studied by five-year periods (Table 87), there has been a rather steady decline from 1880-84, with a rate of 311.8, to 1890-94, with a rate of 229.8. The rate for the year 1893 was nearly the same as for the last five-year period, being 229.2, but that for 1894, as has been stated, is far below any previously recorded rate. Examination of the individual diseases will show that the diminution was shared by nearly all of them, with the exception of small-pox, whooping-cough, and a very slight increase in the low death-rate from consumption. In the following text the characteristics of the mortality from each disease, as displayed for the year, are pointed out.

DEATHS IN MICHIGAN FROM TUBERCULOSIS.

(4) Consumption.....	2,206	The most insidious, the most prevalent, and incomparably the most important disease regarded as a cause of mortality—tuberculosis—has only very recently been admitted to the list of infectious diseases that the health service is endeavoring actively to restrict.
(5) <i>Other tubercular diseases</i>	227	
(6) Marasmus (?).....	92	
(7) Tubercular meningitis.....	41	
(8) Scrofula.....	23	
(9) <i>Tubercles mesenterica</i> (?).....	57	
(10) Other forms of tuberculosis....	14	When we consider that about one-seventh of all the deaths that occur in the State is due directly to consumption, and that the proportion is even higher in the active wage-earning and family-providing period of life, as from 20 to 45 years, during which period nearly one-third of all reported deaths is from consumption, we begin to realize the vast economic importance—to appeal to no higher motives—of the prevention and restriction of this disease. The figures corroborating these statements are of so much importance that the following detailed statements are presented, derived solely from the actual registration returns as recorded in these reports for previous years:
Total deaths from tuberculosis..	2,433	

When we consider that about one-seventh of all the deaths that occur in the State is due directly to consumption, and that the proportion is even higher in the active wage-earning and family-providing period of life, as from 20 to 45 years, during which period nearly one-third of all reported deaths is from consumption, we begin to realize the vast economic importance—to appeal to no higher motives—of the prevention and restriction of this disease. The figures corroborating these statements are of so much importance that the following detailed statements are presented, derived solely from the actual registration returns as recorded in these reports for previous years:

Consumption in Michigan, Twenty-three years, 1872-94.

Total deaths registered from SPECIFIED DISEASES, all ages.....	323,092
Total deaths registered from Consumption, all ages	43,547
Per cent of deaths from Consumption to total deaths from SPECIFIED DISEASES, all ages.....	13.5
Total deaths registered from ALL CAUSES (including deaths from violence and unknown causes) at ages 20 to 44, inclusive.....	73,425
Total deaths from Consumption at ages 20 to 44, inclusive	22,010
Per cent of deaths from Consumption to deaths from ALL CAUSES at ages 20-44	30.0

Contrary to common belief, the death-rate from consumption increases steadily with advancing age. The largest number of deaths is derived from young adults, since that class is represented more numerous in the population than more advanced age-periods, but in proportion to inhabitants at each age, the mortality increases from the early to the late periods of life.

The course of consumption in Michigan has been very regular for the past twenty-five years, as seen in Table 88 and Diagram II, representing the death-rates given therein. The greatest amount of fluctuation in any one direction has been the diminished mortality reported for the last few years, 1890-94, but this decrease, it is believed, is rather apparent than real, being due to the prevalence of epidemic influenza and the great tendency to report deaths of consumptives, whose deaths may, indeed, have been hastened by the epidemic, to the immediate cause rather than to the disease that had weakened the vital resistance and thus prepared the way for the fatal result. The geographical distribution of the disease in this State was illustrated by a map in the Report for 1892 (page 181), to which reference may be made.

Besides the deaths returned from consumption, which term is understood to apply exclusively to pulmonary phthisis, many deaths occur from other forms of tuberculosis, or, rather, tuberculosis of other organs of the body. The deaths returned from consumption of the lungs would probably require to be increased at least ten per cent to represent the total deaths due to the tubercle bacillus. Indeed, this is a very conservative estimate, since it is probable that many cases of intestinal tuberculosis in infants escape recognition. On the other hand it is not certain that the deaths compiled from "marasmus" and "tabes mesenterica" are really tubercular in character. Thus, nearly all the returns of marasmus come from a certain hospital in Detroit, and imply, in all probability, merely a wasting disease of any nature, perhaps consequent on cholera infantum or some other intestinal disorder.

Taken altogether, this group may stand for some important causes of death due to the bacillus tuberculosis, that we do not have accurately returned at present. Many deaths from "unknown" causes, "weakness," "malnutrition," etc., should properly be reported under this head. Much educational work is necessary before we shall have an exact statistical account of the protean forms in which the tubercle bacillus attacks the human organism, and the importance of deriving our information directly from physicians' certificates of causes of death is nowhere more forcibly indicated than in regard to these obscure diseases.

"SCROFULA," AND ITS RELATION TO TUBERCULOSIS.

The fluctuations of medical opinion on the subject of scrofula and its relation-ship to tuberculosis are well described by Frederick Treves, F. R. C. S. Eng., in an address on "The Surgical Aspect of Tuberculosis," delivered before the Man-

chester Medical Society, October 2, 1895:* "Scrofula was in every way a convenient disorder. It was a cloak which covered a multitude of pathological sins. It represented something in the blood; it had a whispered relation to syphilis; there was about it something of the attractive romance which attaches to an obscure domestic scandal. In reality the term stood, like the algebraical x , as representative of a profound quantity of ignorance. There was little agreement as to what scrofula really was, except to the extent that it admitted a large factor of the unknown. As soon as the term 'tubercle' crept into existence scrofula and tuberculosis began to play the part of two Dromios in a tedious Comedy of Errors. . . . At one time all the diseased conditions under dispute were ranked as scrofulous, and at another time as tuberculous; while now and then the agnostic of the time would declare that there was no scrofula or no tuberculosis, according to whichever mood suited his parable.

"About 1679 it dawned upon Francis Sylvius that there was a resemblance between the changes noticed in phthisical lungs and those which had long been familiar in scrofulous glands. . . . Thus pulmonary phthisis came to be regarded as scrofula of the lung, and for long this theory held good. . . . Early in the present century the second great event in the history of tuberculosis was reached. Bayle and Laennec recognized the primary importance of the tubercle, and described with precision its anatomical condition. Scrofula was now dethroned and became a mere humble appendage of tuberculosis. The pituitous humor disappeared forever, and the miliary tubercle reigned in its stead. There then followed an idolatry of the tubercle, which was no whit less fervent than the present worship of the bacillus. . . . Then followed the third epoch in this changeful history. Buhl, in 1857, ventured to regard miliary tuberculosis as an infective disease due to the absorption of a specific virus, and at once a new diagnostic feature came into being. In 1865 Villemin actually demonstrated the infective nature of tubercle by a series of experiments on animals. In the meantime the tubercle had been demonstrated in the whole series of so-called strumous diseases, in the enlarged glands, in the scrofulous ulcer, in lupus, in caries of bone, and in the long familiar 'white swelling.' Finally, in 1882, Koch published the account of his discovery of the tubercle bacillus. That organism was soon shown to be present in every recognized tubercular and scrofulous affection, and here for the present the matter rests. In the fable the mountain was moved and a mouse came forth. The great mystery of the miliary tubercle had been shaken, and there issues the bacillus. Once more the student seems to have reached the limit of philosophical inquiry. As for scrofula, that once all-important disease fades, after multitudinous changes of fortune, into non-existence. As a definite disease it has no being, and the term is merely a ghostly relic of the past."

DIPHTHERIA AND CROUP.

(11) Croup.....	136	For practical sanitary purposes diphtheria and croup are identical, and are so treated by sanitary (and many registration) authorities at the present day. In this report the deaths from diphtheria, membranous croup and croup (unspecified) are distinguished in the tables as in previous years, but the aggregate number of deaths from the three classes of returns can be readily employed instead of the deaths reported directly as diphtheria, if it seem preferable
(12) Membranous croup.....	44	
(13) Diphtheria.....	642	
	—	
Total deaths from diphtheria and croup.....	822	

* London Lancet, Oct. 28, 1895.

to do so. For reasons given in the following text, and as the result of a statistical study of the age and sex incidence of diphtheria and croup in Michigan for 25 years, 1870-94, it still seems desirable to retain the statistical distinction. In most counties the ratios between deaths from croup and diphtheria are quite constant, but in some the tendency is to report fatal cases of what is probably the same disease as croup; in others, as diphtheria.

Next to tuberculosis, diphtheria is the most formidable infectious disease commonly prevalent in this State. Its fluctuations during successive years of registration may be studied in Table 88 (in which deaths from croup are included), and in Diagram II. The most remarkable facts in regard to the course of diphtheria in this State are its immense increase from 1876 to 1881, in which year the deaths reported were more numerous than those from any other cause, even largely exceeding the mortality from consumption (See Table 86), and its gradual decline since 1881, with occasional exacerbations, until the present year, which presents the lowest death-rate from diphtheria and croup recorded since it began to increase in 1877.

In the last Report a colored map was given showing the geographical distribution of diphtheria and croup, by counties, for the five-year period 1888-92. It was there seen that this disease prevails most intensely in the counties having cities of considerable size and in the northern part of the lower peninsula and in the upper peninsula. A study of the geographical distribution of the deaths reported from diphtheria and croup for the year 1894, would give substantially the same results.

AGE AND SEX INCIDENCE OF DIPHTHERIA AND CROUP IN MICHIGAN, BY QUINQUENNIAL PERIODS, 1870-94.

For the purpose of studying the variations in age and sex incidence, Table 93 was prepared from the data presented in this and previous Reports; it contains a full exhibit of the actual returns of the three causes of death, diphtheria, croup and membranous croup, as reported to this Department since the beginning of registration. In Table 94 aggregates are given for the five-year periods lying between 1870 and 1894, and also for the entire twenty-five year period. The data contained in these tables were utilized for a statistical paper presented to the Section on State Medicine of the American Medical Association, at its meeting held at Atlanta, Ga., May 5-8, 1896, from which the discussion following is taken.*

In Table 95 are given the condensed results of registration for twenty-five years as regards these particulars. About 85 per cent of all decedents from croup were under 5 years of age, and about 13 per cent were aged from 5 to 9 years. The proportions at more advanced age-periods were insignificant. From diphtheria a smaller percentage of deaths occurred under 5 years of age (46.3 per cent for males, 42.1 per cent for females), about one-third of the total deaths was at the period of 5 to 9 years, while the period 10 to 14 showed about the same proportion of deaths from diphtheria as the preceding quinquennial period did from croup. Nearly 8 per cent of all deaths from diphtheria were of persons over 15 years of age.

The death-rates per 100,000 mean population from croup are much less than those from diphtheria at every period of age except the first (0-4); the greater concentration of deaths from croup into this period raises the rate of mortality from croup to over 50 per cent of that from diphtheria.

* Age and Sex Incidence of the Mortality in Michigan from Diphtheria and from Croup during Twenty-five Years, 1870-94: A Statistic Study, by Cressy L. Wilbur, M. D., Division of Vital Statistics, Department of State, Lansing, Mich. Journal of the American Medical Association, August 15, 1896.

Table 93.—Deaths returned from diphtheria, membranous croup, and croup in Michigan, by sex and periods of age, for each of the years, 1867-94, inclusive.

Years.	Croup, membranous croup, and diphtheria as returned.	Sex.	Total deaths at all ages.	Ages of decedents, by five-year periods.																
				Under 5 years.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over. Unk. age.
1867-68 (Year ended April 5, 1868.)	Croup	{ Males	64	63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	53	48	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Croup, membran's	{ Males	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-1868 (April 5, 1868, to December 31, 1868.)	Diphtheria	{ Males	61	45	11	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	49	32	9	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	Croup	{ Males	40	37	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	24	22	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1869	Croup, membran's	{ Males	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Diphtheria	{ Males	35	24	6	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	37	16	8	6	3	—	—	—	—	—	—	—	—	—	—	—	—	—
1870	Croup	{ Males	53	47	4	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	52	47	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Croup, membran's	{ Males	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1871	Diphtheria	{ Males	49	29	13	2	4	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	40	18	11	5	2	—	—	—	—	—	—	—	—	—	—	—	—	—
	Croup	{ Males	71	66	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	53	43	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1872	Croup, membran's	{ Males	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Diphtheria	{ Males	56	33	15	4	3	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	65	37	16	8	1	—	—	—	—	—	—	—	—	—	—	—	—	—
1873	Croup	{ Males	78	67	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	68	62	5	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Croup, membran's	{ Males	5	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1874	Diphtheria	{ Males	53	31	13	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	68	32	24	8	2	—	—	—	—	—	—	—	—	—	—	—	—	—
	Croup	{ Males	88	76	6	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	66	56	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1875	Croup, membran's	{ Males	6	4	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Diphtheria	{ Males	88	49	22	9	3	1	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	108	48	39	14	3	—	—	—	—	—	—	—	—	—	—	—	—	—
1876	Croup	{ Males	95	80	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	70	62	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Croup, membran's	{ Males	6	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	{ Males	116	59	36	11	1	4	—	—	—	—	—	—	—	—	—	—	—	—	
	{ Females	103	54	37	8	3	—	—	—	—	—	—	—	—	—	—	—	—	—	

* Until 1872 quinquennial age-periods were not stated above 20 years. The numbers indicated by asterisks are the totals for decennial age-periods.

Table 93.—CONTINUED.—Deaths returned from diphtheria, membranous croup, and croup in Michigan, 1867-94.

Years.	Croup, membranous croup, and diphtheria as returned.	Sex.	Total deaths at all ages.	Ages of decedents, by five-year periods.																
				Under 5 years.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unk. age.
1874.....	{ Croup	{ Males	67	59	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	65	54	7	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1
	{ Croup, membran's	{ Males	6	5	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	4	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Diphtheria	{ Males	108	65	33	5	1	—	1	1	—	—	—	—	1	—	—	—	—	1
		{ Females	108	52	34	11	3	2	—	2	2	—	—	—	—	—	—	—	—	2
1875.....	{ Croup	{ Males	93	79	11	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	63	50	12	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
	{ Croup, membran's	{ Males	9	7	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Diphtheria	{ Males	109	57	31	12	2	—	1	—	1	—	1	1	1	1	1	—	—	—
		{ Females	104	42	42	10	2	1	—	1	2	2	1	—	—	—	—	—	—	1
1876.....	{ Croup	{ Males	96	83	10	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	61	54	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	2
	{ Croup, membran's	{ Males	9	5	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	12	9	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Diphtheria	{ Males	161	70	53	17	5	4	1	3	2	—	1	—	—	—	—	—	—	4
		{ Females	166	78	51	19	5	2	1	2	1	1	—	—	—	1	2	—	—	3
1877.....	{ Croup	{ Males	85	65	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	60	49	10	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
	{ Croup, membran's	{ Males	10	7	2	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
		{ Females	9	6	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Diphtheria	{ Males	300	139	105	34	10	2	2	1	1	—	2	—	—	—	1	—	—	3
		{ Females	295	113	105	52	10	4	5	1	2	1	—	—	—	—	1	1	—	—
1878.....	{ Croup	{ Males	114	97	13	1	—	—	—	—	—	—	1	—	1	—	—	—	—	—
		{ Females	85	70	10	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Croup, membran's	{ Males	20	15	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	17	13	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Diphtheria	{ Males	398	167	131	65	13	4	2	3	—	—	2	2	1	—	—	1	1	—
		{ Females	491	199	179	66	28	6	3	2	1	1	1	1	2	1	—	—	—	6
1879.....	{ Croup	{ Males	148	121	22	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	85	77	7	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Croup, membran's	{ Males	18	11	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	27	19	5	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Diphtheria	{ Males	716	341	238	99	19	7	1	1	1	1	1	1	—	—	—	—	—	6
		{ Females	764	291	269	136	36	8	6	4	2	1	1	1	1	1	—	—	—	6
1880.....	{ Croup	{ Males	148	121	24	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—
		{ Females	109	90	18	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Croup, membran's	{ Males	35	26	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	30	27	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
	{ Diphtheria	{ Males	744	329	256	117	20	10	2	—	—	—	1	—	1	1	—	1	—	6
		{ Females	798	334	286	121	35	11	2	—	1	4	—	—	1	—	—	—	—	3
1881.....	{ Croup	{ Males	190	166	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
		{ Females	126	105	19	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	{ Croup, membran's	{ Males	39	29	8	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		{ Females	25	16	7	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
	{ Diphtheria	{ Males	1,031	448	338	163	44	13	6	1	—	2	1	3	—	2	—	1	—	9
		{ Females	1,032	383	374	174	59	17	5	7	3	1	1	2	—	—	—	—	—	6

Table 93.—CONTINUED.—Deaths returned from diphtheria, membranous croup and croup in Michigan, 1867-94.

Years.	Croup, membranous croup, and diphtheria as returned.	Sex.	Total deaths at all ages.	Ages of decedents, by five-year periods.																
				Under 5 years.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unk. age.
1882	Croup	{ Males	183	162	19	1							1							
		{ Females	120	97	20	2														
	Croup, membran's	{ Males	29	23	6															
		{ Females	17	11	4	2														
	Diphtheria	{ Males	671	319	210	87	33	10	3	1	2	2	1				1			2
		{ Females	745	294	261	130	41	7	3	1	1	3		1					1	4
1883	Croup	{ Males	154	130	20	1		2											1	
		{ Females	130	105	21	3													1	
	Croup, membran's	{ Males	27	19	8															
		{ Females	25	16	5	1		1		2										
	Diphtheria	{ Males	500	261	150	56	17	4	4	2				2	1					
		{ Females	507	226	171	61	81	8	2	1	3									
1884	Croup	{ Males	142	120	15	2	1												1	
		{ Females	143	116	23	1													3	
	Croup, membran's	{ Males	24	13	10	1														
		{ Females	16	14	2															
	Diphtheria	{ Males	502	227	182	59	20	5		1	1								7	
		{ Females	563	250	198	72	26	9	3	1	1	1							2	
1885	Croup	{ Males	157	127	26	3	1													
		{ Females	134	113	17	2			1								1			
	Croup, membran's	{ Males	28	23	4	1														
		{ Females	18	17		1														
	Diphtheria	{ Males	508	225	171	77	14	2	3	1			2	1					7	
		{ Females	551	231	195	72	27	9	3	3	2	1		1					7	
1886	Croup	{ Males	155	124	26	1													4	
		{ Females	141	124	14	1				1									1	
	Croup, membran's	{ Males	57	41	12	4														
		{ Females	47	37	4	3				1									2	
	Diphtheria	{ Males	553	250	168	66	41	13	4	2			2	2					1	
		{ Females	564	239	188	60	33	11	11	1	2					2	2	1	1	
1887	Croup	{ Males	159	135	23	1														
		{ Females	123	106	18	2														
	Croup, membran's	{ Males	68	51	17															
		{ Females	49	31	17	1														
	Diphtheria	{ Males	474	241	148	44	23	6	2	1	1	1			1	1			2	
		{ Females	461	209	139	75	16	6	4	1	2	1	1			1	1	1	4	
1888	Croup	{ Males	214	192	16	2	1											1	2	
		{ Females	170	147	21	1													1	
	Croup, membran's	{ Males	46	39	7															
		{ Females	44	33	8	2													1	
	Diphtheria	{ Males	373	193	107	34	23	3	2	6			1		2				1	
		{ Females	350	165	118	39	15	5	4				1	1				2	1	
1889	Croup	{ Males	173	150	19	2							1						1	
		{ Females	184	149	32	2					1									
	Croup, membran's	{ Males	19	11	7														1	
		{ Females	27	21	6															
	Diphtheria	{ Males	430	199	156	41	19	6	2	1			2	1			1		2	
		{ Females	419	201	144	41	16	5	5	1	2	1	1						2	

Table 93.—CONCLUDED.—Deaths returned from diphtheria, membranous croup and croup in Michigan, 1867-94.

Years.	Croup, membranous croup, and diphtheria as returned.	Sex.	Total deaths at all ages.	Ages of decedents, by five-year periods.																
				Under 5 years.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.
1890.....	{ Croup	{ Males	244	205	30	4	1												4	
		{ Females	171	140	24	5	1												1	
	{ Croup, membran's	{ Males	38	25	11	1	1													
		{ Females	18	13	5															
	{ Diphtheria	{ Males	623	293	210	78	25	6	2	2	2	2	1						2	
		{ Females	643	285	211	90	21	9	5	8	3	2	1		1	1			6	
1891.....	{ Croup	{ Males	133	117	15													1		
		{ Females	120	110	8	1												1		
	{ Croup, membran's	{ Males	18	12	6															
		{ Females	17	11	5	1														
	{ Diphtheria	{ Males	544	232	191	71	24	8	3	5	2	1				3			4	
		{ Females	516	227	174	60	19	16	7	4	2	1	1	2					2	
1892.....	{ Croup	{ Males	123	102	23	1			1									1		
		{ Females	83	69	11	2												1		
	{ Croup, membran's	{ Males	42	30	11	1														
		{ Females	38	24	13				1											
	{ Diphtheria	{ Males	525	218	194	70	23	11	8		2	2	1			1				
		{ Females	495	201	166	79	22	10	9	2	1	1	1						8	
1893.....	{ Croup	{ Males	111	99	11		1													
		{ Females	106	90	12	1	1									1		1		
	{ Croup, membran's	{ Males	22	14	6		1											1		
		{ Females	20	11	5	2	1											1		
	{ Diphtheria	{ Males	452	192	149	67	25	5	5	5	1	1							2	
		{ Females	507	178	185	82	29	8	10	2	4	1	1	3	1			1	2	
1894.....	{ Croup	{ Males	67	60	5	1	1													
		{ Females	69	58	8	2	1													
	{ Croup, membran's	{ Males	24	15	8	1														
		{ Females	20	14	4	2														
	{ Diphtheria	{ Males	314	119	121	51	13	2		2	2		1		1		1		1	
		{ Females	328	125	118	46	14	8	7	4	1		1		1		1		2	

Table 94.—Aggregate deaths returned in Michigan, by sex and periods of age, from diphtheria, membranous croup, and croup, by quinquennial periods, 1870-94; with total for twenty-five year period.

Periods of years.	Croup, membranous croup, and diphtheria as returned.	Sex.	Total deaths at all ages.	Ages of decedents, by five-year periods.																
				Under 5 years.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.
5 years, 1870-74.	Croup	{ Males	366	348	43	2												*1		3
		{ Females	322	277	38	2	1											*1		3
	Croup, memb.	{ Males	25	21	4															
		{ Females	11	9	2															
5 years, 1875-79.	Diphtheria	{ Males	421	237	119	32	11		*6		*2		*2		*6		*3	*1	1	1
		{ Females	452	223	150	49	12		*5		*4		*4					*1		4
	Croup	{ Males	536	445	74	10							1	1	1	1				3
		{ Females	354	300	43	7		1												2
5 years, 1875-79.	Croup, memb.	{ Males	66	45	19	1								1						
		{ Females	67	49	11	6														
	Diphtheria	{ Males	1,684	774	558	237	49	17	7	8	5	1	6	4	2	1	2	3	1	19
		{ Females	1,820	723	646	283	81	21	15	10	8	6	3	2	3	2	2	3	1	10
5 years, 1880-84.	Croup	{ Males	817	699	108	6	1	2		1			1						4	
		{ Females	628	513	101	9													5	
	Croup, memb.	{ Males	154	110	41	3														
		{ Females	113	84	20	3	1	1	1	2										1
5 years, 1880-84.	Diphtheria	{ Males	3,448	1,584	1,136	482	134	42	15	5	3	4	2	4	3	4		3	27	
		{ Females	3,645	1,487	1,290	558	192	52	15	9	9	9	1	2	2				19	
	Croup	{ Males	858	728	110	9	2							1					7	
		{ Females	752	641	97	8				1	2								1	
5 years, 1885-89.	Croup, memb.	{ Males	218	165	47	5													1	
		{ Females	185	139	35	7													3	
	Diphtheria	{ Males	2,333	1,108	750	262	120	30	13	11	1	1	7	4	2	1	2	1	16	
		{ Females	2,845	1,045	784	296	107	36	27	6	8	8	3	2		3	3	3	19	
5 years, 1890-94.	Croup	{ Males	683	583	84	6	3												6	
		{ Females	549	467	63	11	3										1		4	
	Croup, memb.	{ Males	144	96	42	3	1	1											1	
		{ Females	113	73	32	5		1		1									1	
5 years, 1890-94.	Diphtheria	{ Males	2,458	1,054	865	337	110	32	13	14	7	2	6	2	1	1	3	1	9	
		{ Females	2,439	1,016	854	357	105	51	38	20	11	8	5	6	3	1	1	1	15	
	25 years, 1870-94.	Croup	{ Males	3,292	2,803	414	34	6			*2		*2		*1		*3		*2	23
			{ Females	2,603	2,198	342	37	4			*2		*2		*1				*2	15
Croup, memb.		{ Males	607	437	153	12	1			*1						*1			2	
		{ Females	489	354	100	21	1			*3		*4							6	
Diphtheria	{ Males	10,844	4,757	3,428	1,340	424		*175		*56		*31		*28		*17		*11	72	
	{ Females	10,751	4,494	3,724	1,543	497		*260		*85		*37		*20		*12		*10	67	
25 years, 1870-94.	Diphtheria and croup	{ Males	14,243	7,997	3,995	1,386	431		*178		*58		*32		*32		*19		5	
		{ Females	13,845	7,046	4,166	1,601	502		*265		*91		*38		*20		*13		3	
		{ Total	28,088	15,043	8,161	2,987	933		*443		*149		*70		*52		*32		*25	8

* Until 1872 quinquennial age-periods were not stated above 20 years. The numbers indicated by asterisks are the totals for decennial age-periods.

As regards sex, the marked distinction will be noted, that croup causes more deaths of males, diphtheria more deaths of females. Comparing the death-rates at each age-period by sex (and thus eliminating the unequal distribution of the sexes in the population, which would affect the results if the numbers of deaths of each sex were only compared), we find that the proportion of death-rates of males is higher than that of females for croup at all ages and during the quinquennial age-periods 0-4, 5-9, 15-19. For the period 10-14 a lower rate appears for males, while for ages over 20 years the rates are equal. There were only 102 deaths returned from croup over 10 years of age, so that the proportions above the first two periods of age should probably be rejected from insufficiency of data. Except for the first five-year period, during which the death-rates of each sex are nearly the same, with a slight excess of males, diphtheria shows a markedly greater fatality among females. From 5 to 9 years of age about eighteen males die for every twenty females, from 10 to 19 years about seventeen males to every twenty females, and above twenty years of age the disproportion is still greater, being at the rate of only about thirteen males to twenty females.

In both age and sex incidence, membranous croup is seen to occupy an intermediate position between croup, returned only as such, and diphtheria. Contrary to what might have been expected, the proportions, both by sex and age, appear to stand in somewhat closer relation to those of croup than to those recorded for diphtheria. It is therefore obvious that in the statistical treatment of deaths returned from "membranous croup," consolidation with croup is more desirable than consolidation with diphtheria, provided the apparent distinction between these two latter forms of return is to be maintained. This position leaves open the question as to whether all deaths from croup are not largely diphtheritic, the peculiar age and sex incidence of the former being due to clinical distinctions not borne out by bacteriologic criteria.

In any case, from the small number of deaths reported from membranous croup, we shall be justified in neglecting this item, and referring chiefly to the deaths reported as croup and diphtheria in the following comparisons. Also, for convenience, the series of five consecutive quinquennial periods from 1870 to 1894 is generally employed rather than single years. Rates of the average deaths in each period carefully computed from the mean population are used, not the means of the annual rates. Since only .4 per cent of decedents from croup were over 20 years of age, and only about 3.5 per cent of those from diphtheria exceeded 20 years, we shall be justified in grouping all decedents aged 20 years or over together, analysis by quinquennial periods of age being confined to decedents under 20 years of age. We accordingly have four consecutive five-year periods, viz., 0-4, 5-9, 10-14, and 15-19, the study of which is practically exhaustive for the causes of death under consideration. Indeed, it will be found that so few deaths are reported for croup above the age of 10 years, that only the data referring to the first two quinquennial periods are of value in the discussion of this disease.

Table 95.—*Showing, for the twenty-five-year period 1870-94 in Michigan: 1, the percentages of deaths, by sex, at certain periods of age, as returned from croup, membranous croup, and diphtheria; 2, the death-rates per 100,000 population of same age and sex from each disease; 3, the rates of death-rates of males to death-rates of females at each period of age.*

Causes of death as returned, 1870-94.	Sex.	Periods of age of decedents.					
		All ages.	Under 5 years.	5 to 9.	10 to 14.	15 to 19.	20 and over.
<i>Per cents of total deaths from each cause at known ages.</i>							
Croup.....	{ Males	109.0	85.7	12.7	1.0	.2	.4
	{ Females.....	100.0	84.9	13.2	1.4	.2	.4
Croup, membranous.....	{ Males	100.0	72.2	25.3	2.0	.2	.3
	{ Females.....	100.0	73.8	20.7	4.8	.2	1.4
Diphtheria.....	{ Males	100.0	46.3	38.4	13.0	4.1	3.1
	{ Females.....	100.0	42.1	34.9	14.4	4.7	4.0
<i>Rates per 100,000 population of same age and sex.</i>							
Croup.....	{ Males	14.6	108.8	16.2	1.4	.3	
	{ Females.....	12.7	88.8	18.7	1.7	.2	
Croup, membranous.....	{ Males	2.7	16.1	6.0	.5		
	{ Females.....	2.4	13.5	4.0	.9		.1
Diphtheria.....	{ Males	45.8	175.3	134.2	56.4	19.7	2.5
	{ Females.....	52.2	171.4	149.8	67.1	23.8	.8
<i>Per cents of death-rates of males to death-rates of females.</i>							
Croup.....		115.0	123.3	118.2	82.4	150.0	100.0
Croup, membranous.....		112.5	119.3	150.0	55.6		
Diphtheria.....		87.7	102.3	89.9	84.1	84.5	65.8

SEX INCIDENCE OF DIPHTHERIA AND OF CROUP BY YEARS AND QUINQUENNIAL PERIODS.

Sex incidence at all ages is shown in Table 96 for diphtheria, croup, and membranous croup. Individual years are given as well as the results for quinquennial periods. With the exception of a single year, 1873, the death-rates of males from diphtheria are lower than those of females; with five exceptions, 1874, 1884, 1889, 1893 and 1894, the contrary is true for croup. From the small numbers involved, the relations of the mortality of the sexes from membranous croup may be expected to present less uniformity, but on the whole the death-rates of males are greater, as with croup reported without further specification.

In the last two columns of this table the ratios of death-rates of males to death-rates of females from diphtheria and from croup are stated, the death-rates of the females being taken as a basis (100.0 per cent) in each case. This form of expression, which eliminates the error incident to comparison of deaths of males and deaths of females as returned without allowance for relative numbers of each sex in the population, will also be used in Table 97 for comparing the relative mortality of the sexes from each disease at the different age-periods. It will be called, for convenience of reference, the *relative male mortality*. (See upper part of diagram.)

The relative male mortality from croup was slightly higher during the last quinquennial period than during the first; it rose rapidly from 1870-74 to 1875-79 declined nearly as quickly as it rose for the next two periods, and rose again from 1885-89 to 1890-94. The relative male mortality from diphtheria fell slightly from 1870-74 to 1875-79, but has risen since that time. It must be remembered that these statements refer solely to the quinquennial periods as a whole; within these periods are many minor oscillations in the opposite direction to that of the general tendency of the ratios.

By age periods, it will be noted that the curve of croup, 0-4, corresponds very closely to the relative male mortality of croup at all ages, as should evidently be the case since about 85 per cent of all decedents from croup were under 5 years of age. The relative male mortality of decedents from croup aged 5-9 may be said to exaggerate the variations of the group 0-5, rising and sinking more rapidly than the latter, but moving in the same general direction.

The relative male mortality of diphtheria for the two periods 5-9, 10-14, corresponds closely to the relative male mortality of diphtheria at all ages. That of decedents under 5 years of age moves in the opposite direction to that of the two following periods, but on the whole shows little variation. The age-period 15-19, as is generally the case when the aggregate number of deaths is becoming too small for reliable inferences, shows the most violent changes. The relative male mortality from diphtheria between the ages of 15 and 19, during the period 1885-89, exceeded the relative male mortality from croup at any age, something quite the reverse of the usual experience.

AGE INCIDENCE OF DIPHTHERIA AND OF CROUP BY QUINQUENNIAL PERIODS, 1870-94.

In the first part of Table 97 the ratios of deaths, by sex, to total deaths at all ages from diphtheria and from croup are shown, for each of the quinquennial age-periods studied, at each of the five-year periods of registration lying between 1870 and 1894. (See second part of diagram.) It will be observed that the lines representing the sexes are nearly parallel, thus showing that the influence exerted by the factor of sex at each age-period is very nearly constant. The only exceptions to this rule are croup, 0-4, for the period 1875-79, and diphtheria, 5-9, during the last quinquennial period of registration, 1890-94.

The ratio of mortality from croup under five years of age to total mortality from croup at all ages is nearly double that from diphtheria at the same or at any other age-period. Its course is nearly uniform, and averages about 85 per cent for both sexes.

The curves representing the proportional mortality from diphtheria at the periods 5-9 and 10-14 are nearly parallel, and show a slight increase between the two most recent quinquennial periods. Both rose from 1870-74 to 1875-79, continued nearly stationary from 1875-79 to 1880-84, and declined together from 1880-84 to 1885-89. It is evident that the curve representing the proportional mortality from diphtheria in children under 5 years of age must exhibit changes of a compensatory character, that is to say, as appears after examination of the figures, the ratio of decedents from diphtheria aged 0-4 fell from 1870-74 to 1875-79, remained nearly stationary from 1875-79 to 1880-84, rose from 1880-84 to 1885-89, and fell again from 1885-89 to 1890-94.

Table 96.—*Death-rates, by sex, from diphtheria, membranous croup and croup, as returned in Michigan for each of the years 1870-94; with rates for the quinquennial periods included, and for the twenty-five-year period. Also per cents of death-rates of males from diphtheria and from croup to corresponding death-rates of females.*

Years and periods.	Death-rates per 100,000 population, by sex.						Per cents of death-rates of males to death-rates of females.	
	Diphtheria.		Membranous croup.		Croup.			
	Males.	Females.	Males.	Females.	Males.	Females.	Diphtheria.	Croup.
1870.....	9.1	11.5	.3	.2	11.5	9.4	79.1	122.3
1871.....	8.3	11.6	.8	.3	12.2	11.6	71.6	105.2
1872.....	13.4	18.0	.9	.7	13.1	11.0	74.4	119.1
1873.....	17.1	16.6	.9	-----	14.2	11.3	103.0	125.7
1874.....	15.5	17.0	.9	.6	9.6	10.2	91.2	94.1
1875.....	15.0	15.8	1.2	.3	12.8	9.5	94.9	134.7
1876.....	21.4	24.3	1.2	1.8	12.8	8.9	88.1	143.8
1877.....	38.5	41.8	1.3	1.3	10.9	8.5	92.1	128.2
1878.....	49.3	67.4	2.5	2.3	14.1	11.7	73.1	120.5
1879.....	85.8	101.6	2.2	3.6	17.7	11.3	84.4	156.6
1880.....	86.8	103.0	4.1	3.9	17.2	14.1	83.8	122.0
1881.....	115.8	128.9	4.4	3.1	21.3	15.7	89.8	135.7
1882.....	73.1	90.1	3.2	2.1	19.9	14.5	81.1	137.2
1883.....	52.8	59.4	2.9	2.9	16.3	15.2	88.9	107.2
1884.....	51.5	64.0	2.5	1.8	14.6	16.3	80.5	89.6
1885.....	50.6	61.2	2.8	2.0	15.8	14.9	82.7	106.0
1886.....	54.6	61.3	5.6	5.1	15.3	15.3	89.1	100.0
1887.....	45.9	49.0	6.6	5.2	15.4	13.1	93.7	117.6
1888.....	35.4	36.4	4.4	4.6	20.3	17.7	97.3	114.7
1889.....	40.1	42.7	1.8	2.8	16.1	18.7	93.9	86.1
1890.....	57.1	64.2	3.5	1.8	22.3	17.1	88.9	130.4
1891.....	49.1	50.5	1.6	1.7	12.0	11.7	97.2	102.6
1892.....	46.6	47.5	3.7	3.6	11.4	8.0	98.1	142.5
1893.....	39.5	47.8	1.9	1.9	9.7	10.0	82.6	97.0
1894.....	27.1	30.3	2.1	1.8	5.8	6.4	89.4	90.6
1870-74.....	12.8	15.0	.8	.4	12.1	10.7	85.3	113.1
1875-79.....	43.2	51.6	1.7	1.9	13.7	10.0	83.7	137.0
1880-84.....	75.1	88.2	3.4	2.7	17.8	15.2	86.1	117.1
1885-89.....	45.2	49.9	4.2	3.9	16.6	16.0	90.6	103.8
1890-94.....	43.7	47.8	2.6	2.2	12.1	10.5	91.4	115.2
1870-94.....	45.8	52.2	2.7	2.4	14.6	12.7	87.7	115.0

Table 97.—*Showing by sex, the proportional deaths, death-rates per 100,000 like population, and ratios of death-rates of males to death-rates of females, at certain periods of age, from diphtheria and from croup, according to the returns in Michigan, during five quinquennial periods, 1870-94.*

Five-year periods.	Causes of death as returned.	Sex.	Periods of age of decedents.				
			Under 5 years.	5 to 9.	10 to 14.	15 to 19.	20 and over.
Per cents of total deaths from each cause at known ages.							
1870-74	Croup	Males	88.1	10.9	.8		.3
		Females	86.8	11.9	.6	.3	.3
	Diphtheria	Males	56.4	28.3	7.6	2.6	5.0
		Females	49.8	33.5	10.9	2.7	3.1
1875-79	Croup	Males	83.5	13.9	1.9		.8
		Females	85.2	12.2	2.0		.6
	Diphtheria	Males	46.5	33.5	13.6	2.9	3.4
		Females	39.9	35.7	15.6	4.5	4.3
1880-84	Croup	Males	86.0	12.7	.7	.1	.5
		Females	82.3	16.2	1.4		
	Diphtheria	Males	46.3	33.2	14.1	3.9	2.5
		Females	41.0	35.6	15.4	5.3	2.7
1885-89	Croup	Males	85.5	12.9	1.1	.2	.2
		Females	85.4	12.9	1.1		.6
	Diphtheria	Males	47.8	32.4	11.3	5.2	3.3
		Females	44.9	33.7	12.7	4.6	4.0
1890-94	Croup	Males	86.1	12.4	.9	.4	.1
		Females	85.7	11.6	2.0	.6	.2
	Diphtheria	Males	43.0	35.3	13.8	4.5	3.4
		Females	41.1	34.5	14.4	4.2	5.7
Rates per 100,000 population of same age and sex.							
1870-74	Croup	Males	79.2	10.9	.8		.1
		Females	65.1	9.9	.6	.3	.1
	Diphtheria	Males	53.9	30.3	8.5	3.4	1.2
		Females	52.4	39.1	13.5	3.8	.9
1875-79	Croup	Males	89.9	16.4	2.3		.2
		Females	62.6	9.8	1.7		.1
	Diphtheria	Males	156.4	123.3	53.3	13.0	2.6
		Females	150.9	146.1	69.2	21.8	4.1
1880-84	Croup	Males	126.8	19.8	1.3	.2	.2
		Females	96.2	20.0	2.0		
	Diphtheria	Males	287.4	218.6	101.1	30.8	3.3
		Females	278.8	255.3	121.4	44.7	4.5
1885-89	Croup	Males	123.6	19.1	1.7	.4	.1
		Females	112.6	17.2	1.8		.2
	Diphtheria	Males	188.0	130.4	49.6	24.6	2.6
		Females	183.6	139.3	57.7	22.1	3.7
1890-94	Croup	Males	91.2	13.7	1.1	.6	
		Females	76.0	10.5	2.0	.6	
	Diphtheria	Males	164.9	140.9	59.2	20.6	2.5
		Females	165.4	141.8	64.3	19.7	4.9

Table 97.—CONCLUDED.—Showing ratios of death-rates of males to death-rates of females.

Five-year periods.	Causes of death as returned.	Periods of age of decedents.				
		Under 5 years.	5 to 9.	10 to 14.	15 to 19.	20 and over.
<i>Per cents of death-rates of males to death-rates of females.</i>						
1870-74.....	{ Croup	121.7	110.1	133.3	0	100.0
	{ Diphtheria	102.9	77.5	63.0	89.5	133.3
1875-79.....	{ Croup	143.6	167.3	135.3	-----	200.0
	{ Diphtheria	109.6	84.4	77.0	59.6	63.4
1880-84.....	{ Croup	131.8	99.0	65.0	-----	-----
	{ Diphtheria	103.1	85.6	83.3	68.9	73.3
1885-89.....	{ Croup	109.8	111.0	94.4	-----	50.0
	{ Diphtheria	102.4	93.6	86.0	111.3	70.3
1890-94.....	{ Croup	120.0	130.5	55.0	100.0	-----
	{ Diphtheria	99.7	99.4	92.1	104.6	51.0

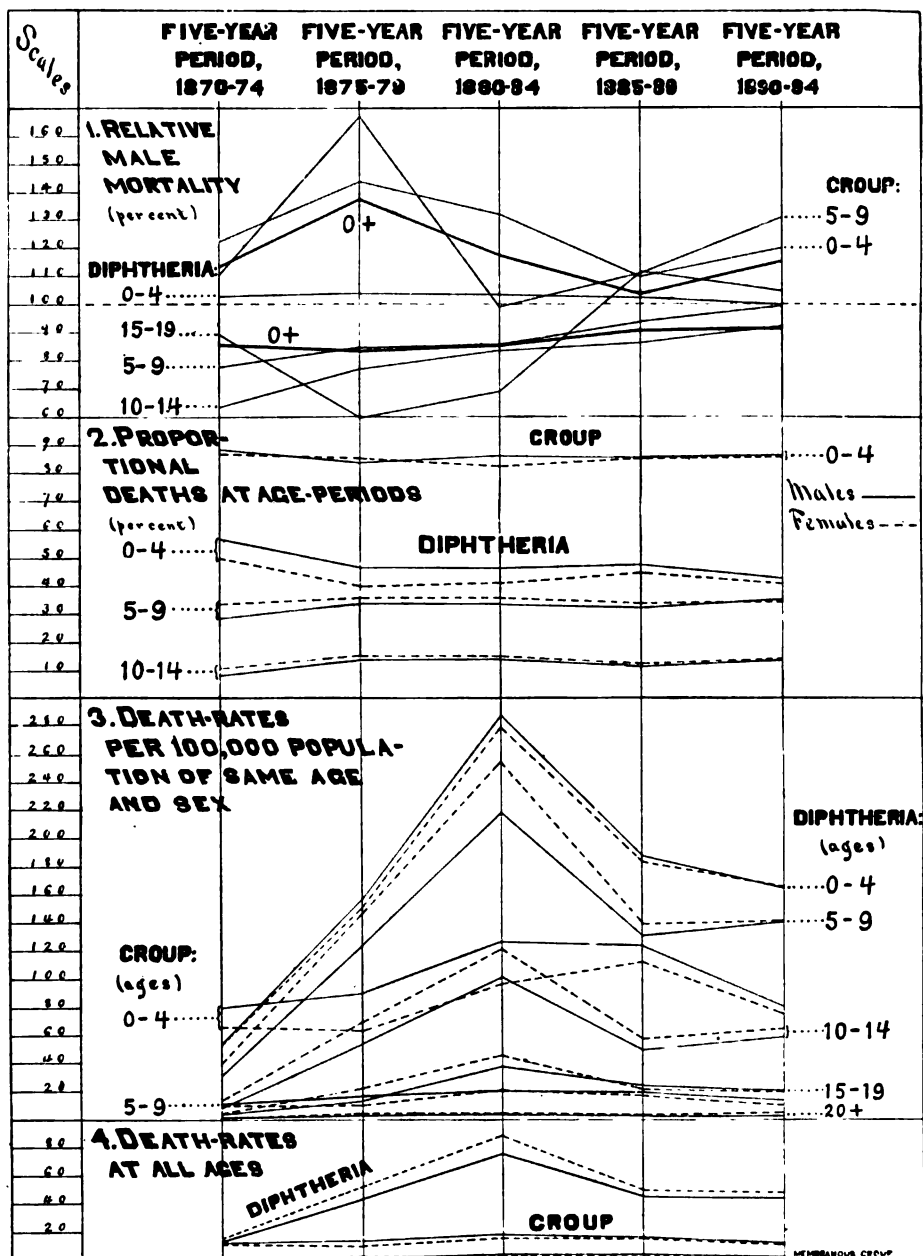
RELATIONS OF AGE AND SEX INCIDENCE OF DIPHTHERIA AND CROUP TO THEIR EPIDEMIC PREVALENCE IN MICHIGAN.

Having considered separately the principal features of the changes in age incidence and sex incidence of diphtheria and of croup as manifested in the statistics of successive quinquennial periods of years, it will be of interest to see what relations these changes bear to the variations in the death-rates. For this purpose the death-rates from diphtheria and from croup at the most important periods of age, and from diphtheria, croup, and membranous croup at all ages, are represented in the diagram, by sex, and may be directly compared with the curves showing relative male mortality from each disease at specified age-periods, and with the curves showing the per cents of deaths at each period of age.

The death-rates per 100,000 population according to the returns are, of course, too low in their absolute values for purposes of comparison with corresponding statistics of states or countries having accurate systems of registration; for this reason a supplementary scale making an estimated correction (addition) of 60 per cent might properly have been added to the diagram on the hypothesis that the percentage of deficiency for these diseases, and for the several age-periods included in them, is substantially the same as the estimated percentage of deficiency in the returns of deaths from all causes and at all ages. So far as the variations in mortality are concerned, ratios of the sexes, etc., the figures represented in the diagram are probably perfectly comparable among themselves, without correction. A constant error in statistical data, affecting various elements uniformly, may be entirely disregarded for purposes of intrinsic comparison.

A characteristic feature of the curves representing the death-rates from diphtheria is the high mortality for the period 1880-84. In the statement by single years (Table 86) it will be seen that the maximum year was 1881, the great epidemic year for diphtheria in Michigan, for which year the number of deaths registered from this cause (2,063) was greater than from any other cause of death, even consumption (1,954) being exceeded. The rise from the first period of registration, 1870-74, to the period 1875-79, and from the latter to the period of maximum prevalence,

DIAGRAM III.—GRAPHIC ANALYSIS OF MORTALITY IN MICHIGAN AS RETURNED FROM DIPHTHERIA AND FROM CROUP, BY QUINQUENNIAL PERIODS, 1870-94, WITH REFERENCE TO AGE AND SEX INCIDENCE.



NOTE.—Males are indicated by a continuous line, —, and females by a broken line, in all cases. Ages are both inclusive; thus 0-4 represents the five-year group aged under five; 0+ represents all ages, etc. Beginning at the lower part of the diagram (4), death rates at all ages per 100,000 population are shown for each cause of death. These rates are further analyzed by age-periods in the part above (3), and the relations of age in parts 1 and 2 respectively. In part 1 the basis of comparison is female mortality (death-rate) taken as 100 per cent.

1880-84, was very rapid, being especially so for children at the age-periods 0-4, 5-9. From 1880-84 the death-rate as a whole declined, somewhat faster than it rose, to the next period, 1885-89, and continued nearly stationary from that to the present time. The ages 5-9 and 10-14 showed a somewhat more rapid decline from 1880-84 to 1885-89 than other ages, and have somewhat increased since 1885-89.

In marked contrast with diphtheria is the uniform and moderate course of croup. A slight amount of variation may, however, be noted, which is mostly in the same direction as the variation of diphtheria for the same time. Taking the age-period 0-4 as especially characteristic, we see that croup increased very slightly from 1870-74 to 1875-79; somewhat more rapidly, but not at all approaching the virulence of diphtheria at this period, from 1875-79 to 1880-84; and, instead of rapidly declining, like diphtheria, remained nearly stationary from 1880-84 to 1885-89. From 1885-89 to 1890-94 the death-rate from croup has diminished.

The relative male mortality from croup appears to sustain a somewhat inverse relation to the general movement of the mortality from that disease. Taking the period 0-4 years of age as typical, the relative male mortality rose noticeably from 1870-74 to 1875-79, while the death-rate increased in less degree; from 1875-79 to 1880-84 and 1885-89, the relative male mortality decreased while the death-rate increased; from 1885-89 to 1890-94, the relative male mortality again rose while the death-rate fell to about the same extent. Nothing very definite appears in regard to the proportional deaths from croup at this age, since the curves representing the ratios of male and female decedents move in opposite directions, and nearly neutralize each other.

The regular and nearly uniform rise of the relative male mortality of diphtheria at all ages, especially at the ages 5-9, 10-14, and the slight decline in the relative male mortality of decedents under 5 years of age, when compared with the very similar mortality curves at all of these ages would seem to indicate that sex has not been an appreciable factor in the epidemic history of the disease; that is to say, variations in the extension and fatality of diphtheria have not been attended with simultaneous special increase of mortality in one sex. The change in sex incidence seems to be a general one, advancing throughout the entire history of the disease, as included in the quarter century of statistics, in a determinate direction, and perhaps dependent upon some general social change or development in the treatment of male and female children.

Age incidence, unlike sex incidence, appears to sustain a certain relation to the degree of epidemic prevalence of diphtheria. This relation is direct for the age periods 5-9, 10-14, and inverse for the period 0-4. That is to say, when an increase in the general mortality from diphtheria and croup occurs, there is an increased percentage of deaths of children over 5 years of age, and a decreased percentage of deaths of children under 5 years of age, as compared with the total mortality.

Dr. H. B. Baker, in a report to the Michigan State Board of Health on "The Present Comparative Immunity of Adults from Diphtheria,"* found that "when the reported deaths from diphtheria are over five-tenths of one death per thousand inhabitants, the average per cent of diphtheria decedents over ten years of age is 22.55, and when the reported deaths from diphtheria are less than five-tenths of one death per thousand inhabitants, the average per cent of diphtheria decedents over ten years of age is 19.27." This observation covered the statistics of Michigan during twenty-one years, 1868-88, for which period the mean per cent of diphtheria decedents aged over 10 years was 20.68.

* *Rep. Mich. State Board of Health, 1891, p. xx.*

Mr. Arthur Shirley, President of the Epidemiological Society, makes the following statements in regard to the changes in age incidence in England and Wales:*

"There has been throughout England and Wales relating to the diphtheria mortality at all ages a considerably augmented incidence of the disease upon the population aged above 3 and under 10 years in the decennium 1871-80, compared with that in the decennium immediately preceding. And in the case of England and Wales as a whole that increase has been maintained throughout the succeeding decennium 1881-90.

"When croup and diphtheria are taken together it is found that in both the periods 1871-80 and 1881-90 there was a relative increase of the disease at school ages (3 to 10) as compared with 1861-70."

Diphtheria declined in England and Wales from 1861-70 to 1871-80, and rose from 1871-80 to 1881-90. Between the two latter periods, therefore, the variation agrees with the tendency in Michigan, but the increased age incidence at older ages from 1861-70 to 1871-80, with a decreasing death-rate, differs from the observation in this State. It is possible that the difference in the exact age-periods taken may in part cause this discrepancy, and that it may be due, in part, to the increased proportion of children exposed at school in England under the Education Act, which went into operation in 1870.

NOTE.—In Tables 95 and 97, quinquennial periods of age are stated as 5 to 9, 10 to 14, etc., being inclusive of both years mentioned. In Tables 93 and 94, the same age-periods are given as 5 to 10, 10 to 15, etc., being inclusive of the first and exclusive of the last year mentioned. Of course the same age-periods are used in both sets of tables.

ERYSIPELAS AND PUERPERAL FEVER.

(14) *Erysipelas* 43 This disease is of comparatively small importance as a cause of death in this State. As shown in Table 86 the number of deaths annually reported has decreased since the early years of registration. This disease is exclusive of deaths from septicemia which were formerly compiled under this title, but are now separately stated.

(15) *Puerperal fever* 33 About the same number of deaths has been reported from this cause for each year of registration, which would indicate, with the increased population of the State, a decrease in mortality. There are probably some deaths in each year included under child-birth, peritonitis and septicemia, which properly belong here, but are not definitely specified in the returns.

SCARLET FEVER.

(16) *Scarlet fever* 163 This is by far the smallest number of deaths from this disease recorded for any year since the beginning of registration. The most favorable years previous to 1894 were 1889 and 1890, with 240 and 222 deaths respectively. Making allowance for increased population, as in Table 88, the extremely favorable record of 1894 becomes still more apparent. The death-rate was only 7.3 per 100,000 population, the lowest previous annual rate being 10.6 for the year 1890.

The general course of scarlet fever in the State since the first years of registration may be seen in Table 88, represented graphically by Diagram II, in which the death-rates are given with proper allowance for increased population. The progressive decline in the death-rates from this cause gives satisfactory evidence of the value of the methods of isolation and disinfection now so generally in use

* Quoted by Edward Seaton, M. D., in a "Report on the Present State of Knowledge Respecting the Etiology and Prevention of Diphtheria," presented on behalf of the English Committee at the Eighth International Congress of Hygiene and Demography, Budapest, 1894. *British Medical Journal*, Sept. 15, 1894.

throughout the State. The disease is now much less important, as a cause of death, than typhoid fever, with which it formerly ranked, and is but slightly more fatal than measles and whooping-cough.

ENTERIC FEVER.

(17) Typhoid fever..... 536 The death-rate from enteric (typhoid)
 (18) Typho-malarial fever..... 22 fever was low for the year 1894 (23.9 per
 (19) Typhus fever..... 2 100,000 population), but was not so low
 as those recorded for several previous years of registration, namely, 1878, 1885 and 1890. Typhoid fever is especially a disease of young and middle-aged adults,* and as this class of the population suffered less than either the very young or the aged from the epidemic influenza of the past few years, and its share of persons with unfavorable expectation of life was less thorough eliminated, in consequence, than from the other age-periods, it cannot be expected that the exceptionally low death-rates of 1894 from diseases of old persons and from children's diseases should also be shared by typhoid fever.

There has probably been little or no typhus fever in Michigan in recent years, the few cases so returned being probably typhoid fever. Deaths from "typho-malarial fever" are at present considered for practical sanitary purposes as equivalent to typhoid fever. In the tables the three terms are employed for the purpose of comparison with former reports, but it would be preferable to employ the term *enteric fever*, especially if the returns were based upon death-certificates from physicians, and in consequence the correctness of the statements made were subject to less doubt than at present.

The course of typhoid fever in Michigan since the first years of registration may be studied in Table 88 and Diagram II in the latter of which, moreover, comparisons may be readily made of the relative importance of typhoid fever and certain other important infectious diseases as causes of death for each year of registration. While the death-rate at present is decidedly lower than it was during the first six years shown in the diagram, namely, from 1869 to 1874, no very marked lessening of the mortality from this cause is observed in recent years. The years 1881 and 1887 present mortalities high above the average from this disease, and the years 1878, 1885, 1890 and 1894 show diminished prevalence.

Comparison of the reported death-rates from typhoid fever in several states having more or less perfect registration, indicates that the mortality from this cause is somewhat higher in the western states than in the eastern states at present; that, moreover, a constant diminution in the typhoid fever death-rate has taken place in the latter during the last fifteen years, while that of the western states has remained substantially constant. Typhoid fever may be expected to be less readily restricted by the temporary measures of isolation and disinfection employed during the actual prevalence of the disease, and more dependent upon permanent sanitary improvements affecting the water supply and drainage of communities, than the other infectious diseases commonly dealt with by boards of health.

The geographical distribution of typhoid fever in Michigan was studied in the last Registration Report (page 168) and illustrated by a tinted map for the five-year period 1888-92. The high degree of prevalence in the counties of the Upper Peninsula is well shown, and examination of Tables 91 and 92 indicates that the mortality from this disease still remains high in the northern part of the State.

* See diagram on page 297, Michigan State Board of Health Report for 1894.

GLANDERS.

(20) *Glanders*..... Only four deaths have been recorded from this disease in Michigan since the establishment of registration. None occurred in the present year. There is, indeed, occasionally some doubt about the deaths reported as due to "glanders," since the term may be intended for "ganders," the latter expression, or the more definite one "yaller ganders," being a common form of report by the supervisors for "jaundice."

MEASLES AND GERMAN MEASLES.

(21) *Measles*..... 84 The measles curve is subject to violent fluctuations, as may be seen in Diagram II, and the year 1894 was a year of diminished prevalence. The death-rate, 3.8 per 100,000 population, was nearly as low as that for 1892, which was 3.3 per 100,000, and was only surpassed by three previous years, 1874, 1878 and 1885. It is probable that restrictive measures are not so thoroughly carried out in the case of this disease as with other diseases dangerous to the public health on account of the general belief in its slight importance.

(22) *German measles*..... 2 German measles or r  theln is of little importance as a cause of death. It is included in the list of dangerous communicable diseases chiefly from the liability of scarlet fever to be mistaken for it, with which disease it has a closer relationship than with measles proper. No deaths appear to have been recorded from this cause prior to 1892, although it is not unlikely that an occasional one has been included among deaths from measles.

"EPIDEMIC" OF SMALL-POX IN MICHIGAN, 1894.

(23) *Small-pox*..... 85 Small-pox was unusually prevalent and fatal in Michigan during the year 1894, the reported deaths exceeding those of any previous year of registration since 1882. The death-rate was 3.8 per 100,000 inhabitants. It will be observed that in this year of unusual mortality from this dreaded disease, the deaths reported exceeded by only one the deaths reported from measles, which latter disease, as stated above, was unusually mild in 1894. Thanks to Sir Edward Jenner, this once awful scourge of the human race has become a disease of very little importance, so far as its effect upon the general death-rate is concerned. There is always the possibility, however, of its establishment as a local epidemic among an unvaccinated population, whose brutal ignorance, as in the case of the Milwaukee small-pox riots during this year, may impede its restriction by the health service.

In Diagram II small-pox is seen to have caused a much smaller amount of mortality than any other of the infectious diseases represented for the past 12 years, while its maxima, in 1872, 1877, 1881-82 and 1894, approximate only to those of measles and whooping-cough, being much less than the death-rates shown for scarlet fever, typhoid fever and diphtheria. It is true, nevertheless, that no disease strikes such terror into the community nor causes such active measures of restriction to be employed.

(24) *Chicken-pox*..... 4 This disease has not yet been officially included in the list of dangerous communicable diseases, although it is probable that this will be done. While unimportant in itself, it is exceedingly liable to be confused with small-pox, especially at the beginning of an epidemic of the latter, and hence its public health importance.

WHOOPIING-COUGH.

(25) Whooping-cough..... 158 A slight increase is noted in the prevalence of this disease as compared with the preceding year. The mortality for previous years of registration may be conveniently examined in Table 88 and Diagram II, from which it appears that the course of this disease has been very uniform in recent years, although showing some decrease since the earlier years of registration. It now causes usually a less number of deaths than measles each year, while from 1869 to 1880 it caused a somewhat larger number on the average. Considering its importance as a cause of death, much less serious effort has been expended upon its restriction than upon some other infectious diseases.

DISEASES NOT CLASSED (AT PRESENT) AS DANGEROUS COMMUNICABLE DISEASES.

Many diseases in the following list, *e. g.*, cholera infantum and pneumonia, are known to be caused by one or more species of bacteria, and will undoubtedly be added in time to the list of officially defined "dangerous communicable diseases." Like the preceding group of dangerous communicable diseases, the arrangement is in general an alphabetical one, which has been so far departed from, however, as to admit of the formation of several groups of diseases classified in relation to the part of the body or special organs affected. Thus under *Brain diseases*, *Bowel diseases*, and corresponding titles, all of the maladies causing diseased conditions of the brain and nervous system, alimentary canal, or other specified organs, are roughly grouped. It must be remembered that infectious diseases, although generally limited to or chiefly affecting some special organ, are elsewhere studied, and also that the titles "cancer" and "tumor" (line numbers 45 and 46) contain deaths from affections of various organs which have not been distributed in accordance with their anatomical seat. For the latter, see Table 98, which specifies the parts of the body affected by neoplastic growths.

DISEASES OF THE BLADDER.

(26) Bladder diseases.....	43	Combined with diseases of the kidneys
(27) Calculus	13	(line numbers 58 to 60), the total number
(28) Cystitis	25	of deaths due to disorders of the urinary
(29) Bladder disease, etc.....	5	apparatus may be ascertained. Diabetes

is separately stated (line number 49), but may be included for comparison with statistics which embrace this title under diseases of the kidneys. Calculus and cystitis were separately stated in the old classification employed in these reports, but all other diseases of the bladder were placed under "kidney disease, etc."

DISEASES OF THE BOWELS.

(30) Bowel diseases.....	2,060	This is a very important group of
(31) Inflammation of bowels.....	396	causes of death in the consideration of
(32) Diarrhea	234	the sanitarian, from the fact that so
(33) Cholera infantum	891	large a proportion of the cases is from
(34) Dysentery.....	100	preventable causes, and occurs in infants
(35) Peritonitis.....	102	and children. Referring to Table 84, in
(36) Bowel disease, etc.....	337	which for the first time in these reports

the separate ages at death under 5 years of age are stated, we observe that of the

2,060 deaths from intestinal disorders that occurred in Michigan during the year 1894, no less than 1,043, or 50.6 per cent, was of infants under 1 year of age; 1,411 of the deaths were of children under 5 years of age, representing a percentage of 68.5. Certainly the great majority of these early deaths from intestinal disorders are due to easily recognized and remedied dietary errors.

Some of the cases of inflammation of the bowels, and many of those included in "bowel diseases, etc.," are diarrheal in character. The nature of the returns does not permit of any very exact distinctions being made between those included under different titles. Thus, of the 234 cases of death from diarrhea, no less than 179 were originally specified as "summer complaint," a recognized synonym for cholera infantum, while, on the contrary, many cases of ordinary diarrhea in infants were returned as "cholera infantum." These diseases are best studied in the aggregate, and according to their age incidence. Many of the deaths reported as due to "convulsions" are really the effects of intestinal diseases, although nearly every system of statistical nosology follows the old plan of Dr. Farr, and includes such deaths under diseases of the nervous system. The defects in the method of collection of statistics of deaths in Michigan preclude any attempt at a systematic comparison of mortality from this class of diseases and weather conditions by months or other subdivisions of the year, although their relations are undoubtedly very intimate. Certain diseases now included in the group, including many of those under diarrhea, dysentery, peritonitis and cholera infantum, are due to one or more micro-organisms, and hence have claims to be included in the specific infectious diseases.

DISEASES OF THE BRAIN AND NERVOUS SYSTEM.

(37) Brain diseases.....	1,829	The number of deaths reported from
(38) Apoplexy.....	283	various affections of the brain and cen-
(39) Congestion of brain.....	81	tral nervous system exceeded that re-
(40) Inflammation of brain.....	302	corded for any previous year of regis-
(41) Epilepsy.....	49	tration, although the death-rate from
(42) Meningitis.....	181	this group of causes of deaths, allow-
(43) Paralysis.....	707	ance being made for increase of popula-
(44) Brain disease, etc.	226	tion, has been several times exceeded.

The increase over the previous year appears to be mostly from apoplexy and paralysis. As shown in Table 87, the death-rate from diseases of the nervous system has pretty steadily increased during each of the five-year periods, with the exception of the first one, 1870-74, which was marked by an epidemic of cerebro-spinal meningitis. The prevalence of epidemic influenza in this State during recent years and its depressing effects upon the inhabitants of advanced ages, have probably tended to increase the deaths of this group.

CANCERS AND TUMORS.

(45) Cancer.....	677	Following Dr. Billings's example in the
(46) Tumor.....	149	Mortality Statistics of the U. S. Census,

deaths from cancers and tumors are studied together. There is much confusion of the two terms in their ordinary use. Pathologically, all cancers are tumors, but not all tumors are cancers; in common language, the term "tumor" appears to be restricted to non-malignant growths, or to malignant growths concealed from observation, such as cancer of the stomach. In Table 88 and Diagram II the course of cancer in Michigan may be examined for each year of registration,

Table 98.—Deaths returned from cancer in Michigan for the year 1894, and for the twenty-two years, 1872-93 inclusive, specifying the part of the body affected.

Cancer of—	Year 1894.			Twenty-two years, 1872-93.		
	Total.	Males.	Females.	Total.	Males.	Females.
All organs	677	269	408	7,866	3,374	4,492
Abdomen	1	1				
Arm				6	3	3
Back				1	1	
Bladder	1	1		23	20	3
Bone	1	1		4	4	
Bowels	19	4	15	153	60	93
Brain	1		1	4	3	1
Breast	25		25	452	24	428
Chest	1		1			
Ear				3	2	1
Eye	1	1		17	8	9
Face	8	7	1	226	166	60
Foot				4	4	
Gall bladder				1		1
Groin				4	3	1
Hand				5	4	1
Head				35	21	14
Heart	1		1	7	2	5
Hip				2	1	1
Jaw				4	4	
Kidney	1	1		10	7	3
Leg	2	2		21	14	7
Lip	2	2		4	4	
Liver	14	7	7	192	100	92
Lungs	1		1	19	8	11
Mouth	2	1	1	89	60	29
Neck	2	1	1	36	27	9
Nose				3	3	
Omentum				1		1
Ovaries				2		2
Esophagus	1	1		3	1	2
Palate	1	1				
Pancreas	1	1		5	3	2
Pylorus				1	1	
Rectum	8	4	4	35	20	15
Shoulder				2	2	
Side	2	1	1	13	2	11
Spleen				1		1
Spine				5	2	3
Stomach	181	97	84	1,988	1,170	818
Throat	10	7	3	102	61	41
Thigh				1		
Testicles	1	1		3	3	
Tongue	3	2	1	28	17	11
Tonsils				1		1
Unspecified part	348	125	223	4,048	1,538	2,510
Urethra				1		1
Uterus	86		86	301		301

NOTE.—Deaths returned from "tumor" in Michigan, 1894. There were 149 deaths, 40 males and 109 females, thus returned, many of which were probably deaths from cancer. Their distribution, by sex and organs affected, was as follows: Abdomen, 3 females; bowels, 2 males, 1 female; brain, 4 males, 5 females; breast, 1 female; face, 1 male; hip, 1 male; leg, 1 female; lungs, 1 male; kidneys, 1 female; neck, 1 male, 2 females; ovary, 15 females; rectum, 1 male; side, 3 males; stomach, 5 males, 12 females; throat, 3 males; uterus, 3 females; unspecified, 18 males, 65 females.

and its constant and regular increase in importance as a cause of death will be noted. The sinuous regularity of the curve and the absence of the fluctuations characteristic of the infectious diseases represented, are especially characteristic.

An increase in the mortality from cancer is generally indicated for recent years, not only in the Michigan reports, but in those of other states and countries. It has been claimed that the large increase in the mortality from cancer is more apparent than real, and is due chiefly to more accurate diagnosis of cancers of inaccessible parts of the body.

In Table 98, on the preceding page, may be seen the distribution of deaths from cancers and tumors, by sex and according to the parts of the body affected, for the year 1894, and also, for cancers only, for the period of twenty-two years, 1872-93. Of the whole number of deaths reported from cancer in the 22 years, 42.9 per cent were males and 57.1 per cent females. Excluding from the total number of deaths of males all cases in which the organ affected was unspecified, we have 1,836 cases, of which 1,170 or 63.7 per cent were deaths from cancer of the stomach. Among females, the ratio of deaths from cancer of the stomach was less, being 41.3 per cent; 428 deaths, or 21.6 per cent were from cancer of the breast, and 301 deaths, or 15.2 per cent were from cancer of the uterus.

DEATHS CAUSED BY CHILDBIRTH.

(47) Childbirth..... 213 Besides the deaths returned under this head, there were 33 deaths from puerperal fever not included here, but classed under dangerous communicable diseases (line number 15). The deaths resulting from childbirth have remained very uniform for the years given in Table 86, showing, as there has been a large increase in population in that time, that the death-rate has constantly diminished.

DEATHS FROM "CONVULSIONS."

(48) Convulsions..... 412 This is an indefinite term, merely expressive of the symptoms in deaths from certain causes. When specified as epileptic, puerperal or uremic, they are classified elsewhere. Nearly eight-tenths (76.7 per cent) of the total number were deaths of children under five years of age.

Dr. Farr's original nosological classification of causes of deaths, which has served as a basis of most later ones, classified convulsions under the head of diseases of the nervous system, guided, evidently, by the obvious agency of the nervous system in convulsive attacks. Probably the great majority of fatal cases of "convulsions," especially in infants and young children, are not primarily of nervous origin, but are the effects of diseases of the digestive organs. After citing a careful analysis of 281 reported deaths from "convulsions," in Dresden during the period of July 11 to September 25, 1886, of which number actual disease of the nervous system caused only 36 deaths, while cholera infantum and diarrhea caused seven-eighths of the whole number, Dr. Vaughan concludes that "These figures will probably hold good for the United States, and we are justified, I think, in claiming that more than 90 per cent of the deaths reported as due to convulsions are really due to digestive disturbances."*

* Infantile Mortality; Its Causation and its Restriction, by Victor C. Vaughan, M. D., Ph. D., Jour. Amer. Med. Assn., Vol. 14, p. 182.

DIABETES.

(49) Diabetes..... 106 Deaths thus returned have usually been considered to be from diabetes mellitus, although rarely so specified. A marked increase is apparent in deaths recorded from diabetes for 1893 and 1894 as compared with any of the previous years shown in Table 86.

DEATHS FROM "DROPSY."

(50) Dropsy..... 400 This is another indefinite return of cause of death which would be practically eliminated from registration reports under an efficient system of registration. In all cases of "dropsy," the disease responsible for that condition should be stated, whether cardiac, renal or other. Were the statements of causes of death based upon physicians' certificates, there would be hope for improvement in this respect, but under the present registration law these indefinite returns will continue to constitute a large percentage of total deaths.

"FEVER" (UNSPECIFIED FORM) AND MALARIAL FEVER.

(51) Fever..... 75 The deaths returned simply as due to "fever" may have been caused by typhoid fever, malarial fever, or by any disease attended with a noticeable rise of temperature, such as pneumonia, or the exanthemata. Puerperal fever and septicemia after traumatism may not unfrequently be here included. The return has little interest or importance from its indefinite character, except as it may indicate a possible margin of correction of typhoid fever or other definitely specified fevers.

(52) Malarial fever..... 91 This is the smallest number of deaths ever returned from this cause in Michigan, as shown by Table 86. Malarial diseases have steadily diminished during the entire period of registration.

DISEASES OF THE HEART AND CIRCULATORY SYSTEM.

(53) Heart diseases..... 1,391 Very few of the deaths returned from diseases of the heart specify the exact form of the malady, so that the 898 deaths from heart disease were practically all returned in this indefinite form. This number does not include the 405 deaths from "heart failure," which have been separately compiled since 1891. For preceding years, as shown in Table 86, these deaths were included in heart disease. They are generally equivalent to deaths with cause unspecified,—so returned either through ignorance or carelessness,—and probably imply no actual heart disease. For this reason the statistics of heart disease at present are not comparable with those of years antedating the common use of this pernicious term.

Taking the returns at their face value, however, it is shown in Table 87 that the mortality from heart diseases has more than doubled in Michigan since the early periods of registration. The last few years have given an unusually high mortality from these causes. This increased death-rate from diseases of the circulatory system may be due in part to the increase in average age of the inhabitants of the State, and the high fatality of the years 1890-94 may come largely as a result of the epidemic of influenza.

EPIDEMIC INFLUENZA, OR "LA GRIPPE."

(54) Influenza 402 Influenza continued to be reported during the year, although with diminished intensity as compared with the years immediately preceding. The first three months of the year contributed 182 out of the total number of deaths, 402, that occurred during the year. This was evidently a continuation of the attack that began abruptly in December, 1893, with 252 deaths.

In Michigan there is an undoubted tendency, owing to the manner of collecting the data, for many deaths to be ascribed to "la grippe" that would be referred to other causes were the statements as to cause of death derived from death certificates issued by physicians. Every disease whose onset is attended with acute catarrhal symptoms is likely to be so returned, no matter what organs were ultimately involved, and many consumptives, whose deaths would have undoubtedly occurred during the past few years in the natural course of that disease, have been returned as dying from influenza, a cause that merely accelerated death. All of these considerations must be taken into account in studying the reported mortality in Michigan from epidemic influenza, and especially in comparing the mortality in this State with that of other states and countries having more accurate systems of registration. The following table exhibits the deaths reported for each month of the past five years from this disease:

Deaths in Michigan from influenza ("la grippe"), by months, according to the returns for the years 1889-94.

Years.	Total for year.	Months.												
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Unk.
1889-----	176	30	28	17	11	6	7	2	2	4	8	19	41	
1890-----	1,084	174	210	154	133	79	60	44	53	36	46	37	56	
1891-----	1,076	110	83	96	249	110	62	48	31	43	37	38	160	
1892-----	907	351	209	99	58	35	24	18	19	17	19	30	28	
1893-----	555	43	41	28	26	33	30	14	15	20	24	39	252	
1894-----	402	82	45	55	39	23	15	14	20	13	26	23	37	

The importance of accurately distinguishing in the certificate of death the primary and secondary causes is now well understood, and in the case of a disease like influenza that destroys in so many ways, through its association with various complications and sequelæ, such information is absolutely essential. The forms of death certificates in use in the State of New York provide for the return of the immediate and remote causes of death, and the bill presented to the last legislature in the interest of an improved system of registration in Michigan had this provision. As an illustration of the valuable information collected by means of such a form of returns, and as giving, moreover, interesting details concerning the incidence of influenza in a European country during the same epidemic as that to which the Michigan statistics relate, the following data are presented, derived from the Statistical Year Book of Switzerland, 1895, p. 270. In the original table full particulars are given with respect to ages and sex of decedents:

Deaths in Switzerland directly and indirectly from influenza during the years 1889-90 to 1894.

Causes of death.	1894.	1893.	1892.	1891.	1889-90.
TOTAL DEATHS DIRECTLY OR INDIRECTLY FROM INFLUENZA	2,275	1,376	617	268	2,069
I. INFLUENZA ALONE	452	289	225	81	518
II. INFLUENZA WITH COMPLICATIONS	1,288	787	298	116	1,489
(a) Of respiratory organs.....	1,081	635	235	78	1,174
(b) Of circulatory system.....	115	63	20	7	60
(c) Of nervous system.....	78	45	23	22	132
(d) Of digestive organs.....	24	20	10	5	34
(e) Of urogenital system.....	14	7	2	1	14
(f) Of other organs.....	11	4	—	—	12
(g) Of several organs.....	15	13	3	3	13
III. DISEASES FOLLOWING INFLUENZA (SEQUELÆ) ..	84	72	25	29	187
(a) Of respiratory organs.....	54	44	19	23	99
(b) Of circulatory system.....	9	7	—	1	11
(c) Of nervous system.....	5	6	2	1	10
(d) Of digestive organs.....	1	1	—	—	4
(e) Of urogenital system.....	6	4	2	1	2
(f) Of other organs.....	9	10	2	3	31
IV. INFLUENZA AND CONCOMITANT DISEASES	451	228	74	42	555
(a) Of respiratory organs.....	119	59	21	6	207
(b) Of circulatory system.....	84	46	18	8	101
(c) Of nervous system.....	17	5	—	—	16
(d) Of digestive organs.....	20	3	3	1	21
(e) Of urogenital system.....	13	12	1	1	15
(f) Of other organs.....	128	102	31	26	196
(g) Of several organs.....	—	1	—	—	—

It thus appears that nearly one-half of the total mortality in the above table is due to influenza complicated with affections of the respiratory organs, chiefly pneumonia. Deaths so caused would be mostly returned from pneumonia alone where physicians report only one cause of death; in Michigan, where the reports do not usually pass through the hands of medical men, such deaths would be chiefly, and as it happens more correctly, reported as due to influenza. Of course the best way is to report both the primary and secondary causes as in the data given above.

DISEASES OF THE KIDNEYS.

(58) <i>Kidney diseases</i>	549	The great majority of deaths returned
(59) <i>Inflammation of kidneys</i>	414	from diseases of the kidneys, especially
(60) <i>Kidney disease, etc.</i>	135	those included under the term inflammation of the kidneys in the table, were

originally specified as due to Bright's disease. The aggregate number of deaths from renal disease for the year considerably exceeded that reported for any previous year of registration. Like heart diseases, kidney diseases seem to be increasing in this State during the period of years covered in Table 86. This may be, as has been observed elsewhere, on account of better diagnosis, and also, in part, from changes in fashion in medical nomenclature. Many deaths that would have been returned simply as "dropsy" in former years would at present be ascribed to some form of Bright's disease.

DISEASES OF THE LIVER.

(61) Liver disease, etc..... 162 The returns under this head do not suggest much accuracy of statement as a rule, and are probably little to be relied upon. As shown in Table 87, the mortality from this group has decreased slightly since the early years of registration.

DISEASES OF THE LUNGS.

(62) Lung diseases.....	1,690	This very important group does not
(63) Asthma	74	include consumption, the most fatal of
(64) Bronchitis.....	174	all diseases of the lungs, which is
(65) Pleurisy	29	included among the dangerous com-
(66) Pneumonia	1,200	municable diseases owing to its infec-
(67) Congestion of lungs.....	81	tious character.* For convenience,
(68) Lung disease, etc.....	132	however, the number of deaths from
(4) Consumption	2,208	consumption is placed below the list,

Total..... 3,896 and the aggregate number of deaths from diseases of the lungs stated. This was 3,896 persons, or nearly a quarter (23.0 per cent) of the entire mortality from specified causes during the year. Pneumonia should undoubtedly also be ranked among the infectious diseases, and, therefore, among those classed as communicable and dangerous to the public health, but practical sanitation in this respect lags behind the most advanced medical opinion.† As the classification of diseases used in this Report is intended to show the actual results of public health work, without reference to theoretical or ideal considerations, pneumonia is properly included in the list of lung diseases whose incidence, in the minds of the people generally, has an inevitable character, is not to be quarantined against or avoided, or treated as a dangerous infectious disease; in short, it occupies very much the same position in the consideration of the public that consumption itself did a very few years ago, and does even to-day in many places, before the active efforts of health authorities directed special attention to its restriction.

Besides the deaths returned from consumption, many of those compiled from pleurisy are undoubtedly tubercular in character; so also are many from bronchitis, and probably most of those under "lung disease, etc." The latter term contains a few deaths reported from hemorrhage of the lungs (generally, but not necessarily, a result of phthisis), but is mostly made up of deaths returned from "lung trouble" or "lung disease," both terms common localisms for consumption. Congestion of the lungs, formerly compiled under "lung disease," has been stated separately since 1891 because, in the opinion of the compiler, it is merely a local expression for pneumonia in the majority of cases.

The death-rate from pneumonia was the lowest since the year 1887, being only 53.5 per 100,000 population. The course of this disease in Michigan may be traced through previous years of registration by referring to Table 88 and the diagram on the opposite page (Diagram II), which graphically represents the same figures. From these it appears that this disease has been more than usually prevalent during the last few years, and if the deaths immediately caused by pneumonia, but returned from influenza, could be added, it is probable that the death-rate from this disease would reach an unprecedented height.

* So classed by the Michigan State Board of Health on September 30, 1893.

† Pneumonia has since been placed among the dangerous communicable diseases (1895), and the next Report will show a rearrangement of this list.

RHEUMATISM.

(69) Rheumatism..... 151 While rheumatism is of great importance as a cause of sickness in Michigan, it is of less interest as a cause of mortality. Rheumatic fever, nevertheless, is coming to be regarded as an infectious disease, and while seemingly unimportant, numerically, as a direct cause of death, its effect as an important factor in deaths returned from other causes, notably from heart diseases, should not be underrated. In a paper read before the Royal Statistical Society, 17th December, 1895, Dr. Arthur Newsholme says on this point: "Rheumatic fever, like many other diseases of great importance, very seldom kills during the attack of fever, but chiefly by the heart disease, which may prove fatal years later. Hence curves of the annual deaths from rheumatic fever are of comparatively little value unless for very large communities; and, if we judge from them, or from the figures from which they are constructed, we should conclude that rheumatic fever is a disease of slight importance, instead of being, as it is almost, the most important disease in our midst. I have elsewhere estimated that in this country at least four persons in every thousand are on an average attacked annually by rheumatic fever." The sickness statistics collected by the Michigan State Board of Health give direct evidence of the very great prevalence of rheumatism in this State. It caused more sickness than any other disease during the period 1881-92, according to the reports made by physicians.*

SEPTIC INFECTION.

(70) Septicemia..... 154 This represents an indefinite form of return, the majority of the cases being reported as "blood poisoning." Whether after wounds or injuries, or after parturition, is not specified except in a few cases which have been included under the proper heads. In the early reports, deaths from septicemia were classed with deaths from erysipelas under the latter title, which fact should be borne in mind in consulting them.

DISEASES OF THE SPINE.

(71) Spine disease, etc..... 103 Another indefinite return, it being uncertain whether disease of the spinal cord or of the vertebræ is intended. Most of the deaths are returned from spinal disease of unspecified character.

DISEASES OF THE STOMACH.

(72) Stomach diseases..... 249 Diseases of the stomach are not usually specified very definitely. The very large number of deaths from cancer of the stomach has been already referred to under the subject of cancer, but it is very probable that many of the deaths reported as simply due to "disease of the stomach" may have been due to cancer. From an inspection of Tables 86 and 87, it appears that diseases of the stomach are rather more prevalent in recent periods of years.

* Rep. Mich. State Board of Health, 1894, p. 112.

SYPHILIS.

(75) Syphilis..... 26 Deaths from this disease are probably not fully reported in Michigan. This has been the experience of countries where the registration of causes of death is far more precise than in this State, and it is not likely that our statistics, collected as they are from the friends and relatives of decedents, would show even the approximate number of deaths from this cause. It would seem certain, however, that many deaths of children in cities and many cases of still-births are the result of syphilitic infection.

UNCLASSIFIED DISEASES.

(76) Unclassified diseases..... 1,656 Unclassified diseases include the total deaths from uncertain and indefinite causes, sufficiently distinguished, however, to be recognized as certainly deaths from disease and not from violence, besides which a number of minor diseases of small numerical importance is included. The detailed list is as follows:

Abcess, unspecified part, 58; abcess of abdomen, 1; abcess of head, 5; abcess of breast, 1; abcess of groin, 1; abcess, lumbar, 1; abcess, internal, 1; abcesses of side, 4; abcess under arm, 1; abcess of pelvis, 2; Addison's disease, 1; alcoholism, 12; "agony," 1; "ailing when born," 1; aneurism, 2; aneurism of aorta, 1; anemia, 5; anemia, pernicious, 7; arm, inflammation of, 1; arteries, calcareous degeneration of, 1; atelectasis, 1; athrepsia, 2; atrophy, 1; "blood disease," 1; blood, rush of, 1; blood-vessel, rupture of, 15; "broken heart," 1; canker, 5; carbuncle, 3; catarrh, 8; "chronic," 1; cirrhosis, 1; cold, 33; cold in head, 1; chlorosis, 1; "complication," 21; "complication of diseases resulting from wounds in army," 1; coangestion, 4; "consumption of blood," 7; cough, 3; "could not determine," 1; debility, 185; "decline," 2; "decay, natural," 1; delirium tremens, 3; "died at birth," 6; "dropped dead," 1; eczema, 7; "eruptions," 1; exhaustion, 13; fever sore, 1; fistula, recto-vaginal, 1; fistula, vagina-vesical, 1; "found dead," 3; gangrene, 30; goitre, 2; headache, 1; hemorrhage, part unspecified, 18; hiccough, 1; Hodgkin's disease, 1; hydrophobia, 1; inanition, 67; infantile, 3; inflammation, unspecified part, 34; innutrition, 2; "internal," 2; jaw-bone, necrosis of, 1; joints, ossification of, 1; laryngitis, 1; leg, disease of, 1; leucocythemia, 2; limb, ulcer on, 2; malformation, 6; malnutrition, 3; menopause, 4; "milk crust," 1; milk, change of, 1; milk, want of mother's, 1; mouth, sore, 3; mouth, cankered sore, 4; mumps, 2; "natural causes," 3; neuralgia, 15; neurasthenia, 1; nerves, disease of, 2; nervous prostration, 36; "nervousness," 1; non-nutrition, 1; nose, hemorrhage of, 2; "no disease," 1; "no cause," 2; esophagus, obstruction of, 1; esophagus, stricture of, 1; old-age, 748; ovaritis, 6; ovaries, hemorrhage of, 1; "only a spree—no cause given," 1; "pain in head and stomach," 1; pemphigus, 1; phlegmasia dolens, 2; pleuro-neuralgia, 1; rachitis, 1; salpingitis, pyosalpinx, 13; "self abuse," 1; "sickness," 1; skin disease, 2; spleen, enlargement of, 2; spina bifida, 3; "stomach, assimilation of," 1; stricture, 4; "system, general breaking down of," 3; sudden death, 2; teething, 54; tetanus, 11; trismus, 1; tonsillitis, 22; thrush, 5; teeth, ulceration of, 1; "total disability," 2; throat, sore, 3; throat, disease of, 3; throat, cankered, 1; throat, abcess of, 2; throat, paralysis of, 2; throat, ulceration of, 1; ulcer, 2; umbilical cord, hemorrhage of, 1; urinary organs, disease of, 1; uterus, disease of, 6; uterus, hemorrhage of, 1; uterus, inflammation of, 3; uterus, prolapse of, 1; uterus, stricture of, 1; uterus, ulceration of, 3; vaccination, 1; "vaccination, heart disease caused by," 1; "worn out," 1. Besides these there are 32 deaths reported in which the causes were utterly unintelligible, although the reporter had evidently endeavored to express the name of some disease.

DEATHS FROM VIOLENCE IN MICHIGAN, 1894.

The category of deaths from violent causes comprises three general heads: (1) deaths from accidental injuries; (2) suicides, and (3) deaths caused by homicidal violence. All deaths returned simply as due to drowning, poison, etc., the circumstances attending being otherwise unspecified, are presumed to be accidental. Doubtless a few suicidal cases are thus included. Under "homicide" most of the instances are returned as "murder." The statements given in the returns are not sufficiently definite to determine the legal character of the crime involved, and accordingly all are grouped under the general term.

In Table 102 may be found a statement of the number of deaths reported from each of these classes by sex, months of death, and periods of age of decedents, and also, under the general heading "accidental," the numbers returned from the chief causes of accidental death, namely, burning, drowning, heat and sunstroke, gunshot-wounds, lightning, mining accidents, poison, railroad accidents and injuries from horses and vehicles.

Table 99 presents a detailed statement of the total number of deaths in the State in 1894 from these causes, and from certain minor causes included in one group under the heading "all other casualties" in the table. The distribution of the principal causes of violent deaths is given for the counties of the State in Table 100, and Table 101 gives the deaths and death-rates per 100,000 population from accidents, suicides and homicides for each year of registration since 1870. Five-year averages enable the general tendency of the returns of violent deaths to be readily appreciated.

Table 99.—Deaths from violence in Michigan, 1894, manner specified.

Manner of death.	Number.	Manner of death.	Number
TOTAL NUMBER OF DEATHS FROM VIOLENT CAUSES.....	1,213	II.—SUICIDAL	176
I.—ACCIDENTAL.....	1,020	Asphyxia.....	1
II.—SUICIDAL.....	176	Cutting throat.....	3
III.—HOMICIDAL.....	17	Drowning.....	7
		Hanging.....	28
I.—ACCIDENTAL.....	1,020	Poison.....	31
Burning.....	73	Arsenic.....	1
Drowning.....	182	Laudanum.....	3
Gunshot.....	57	Morphine.....	8
Heat and sunstroke.....	16	Paris green.....	1
Lightning.....	12	Prussic acid.....	1
Mining accidents.....	30	Unspecified.....	17
Poison (not stated as suicidal).....	61	Shooting.....	11
Railroad accidents and injuries.....	97	Strangulation.....	3
Vehicles and horses.....	55	Unspecified.....	92
All other casualties.....	487	III.—HOMICIDAL	17
Animals other than horses.....	3	"Clubbed to death by husband".....	1
Asphyxia.....	21	Shot.....	3
Birth, Injury at.....	13	"Murdered"—not further specified.....	13
Boiler explosion.....	6		
Exposure.....	1		
Fall.....	37		
Falling tree.....	25		
Fractures.....	34		
Freezing.....	6		
Machinery in mills, etc., Injuries from.....	7		
Outdoor employments, Injuries in.....	15		
Scalding.....	16		
Surgical operations.....	40		
Miscellaneous and unspecified.....	213		

Table 100.—Deaths from violence in Michigan, by counties, 1894.

State and counties.	Total deaths from violence, 1894.	I.—Accidents.											II.—Suicides.	III.—Homicides.
		Total.	Burning.	Drowning.	Gunshot.	Heat and sunstroke.	Lightning.	Mining.	Poison.	Railroad.	Vehicles, etc.	All others.		
State.....	1,213	1,020	73	182	57	16	12	30	61	97	55	437	176	17
Alcona.....	2	2	—	1	—	—	—	—	—	—	—	1	—	—
Alger.....	2	2	—	—	1	—	—	—	1	—	—	—	—	—
Allegan.....	20	16	2	5	1	—	1	—	—	—	3	4	3	1
Alpena.....	9	9	—	2	1	—	—	—	1	2	—	3	—	—
Antrim.....	3	2	1	—	—	—	1	—	—	—	—	—	1	—
Arenac.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Baraga.....	3	2	—	1	—	—	—	—	—	—	—	1	—	—
Barry.....	11	7	1	2	—	—	—	—	1	—	2	1	4	—
Bay.....	32	31	—	6	—	—	—	—	4	1	2	18	1	—
Benzie.....	5	5	—	—	—	—	—	—	1	—	—	4	—	—
Berrien.....	20	13	—	3	1	—	—	—	2	1	1	5	7	—
Branch.....	15	12	1	2	—	—	—	—	1	1	2	5	2	1
Calhoun.....	15	12	1	—	—	—	—	—	2	2	2	5	3	—
Cass.....	13	13	—	3	—	—	—	—	—	—	2	8	—	—
Charlevoix.....	7	6	—	2	—	—	1	—	—	1	—	2	1	—
Cheboygan.....	7	6	2	3	—	—	—	—	—	—	—	1	1	—
Chippewa.....	12	10	1	4	—	—	—	—	—	—	—	5	2	—
Clare.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Clinton.....	2	2	—	—	—	—	—	—	—	—	1	1	—	—
Crawford.....	1	1	—	—	—	—	—	—	—	—	—	1	—	—
Delta.....	13	10	—	7	1	—	—	—	—	—	—	2	2	1
Dickinson.....	12	9	—	3	—	—	—	1	—	—	—	5	1	2
Eaton.....	14	11	1	—	2	—	—	—	1	4	—	3	3	—
Emmet.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Genesee.....	17	13	1	—	1	—	—	—	—	1	1	9	4	—
Gladwin.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gogebic.....	12	11	2	—	1	—	—	4	—	—	—	4	1	—
Gr'd Traverse.....	18	12	—	4	2	—	—	—	—	2	—	4	6	—
Gratiot.....	5	4	—	—	1	—	—	—	—	—	1	2	1	—
Hillsdale.....	10	6	—	1	—	—	1	—	1	1	—	2	4	—
Houghton.....	33	32	3	5	3	—	—	12	1	2	—	7	1	—
Huron.....	9	7	1	2	—	—	—	—	—	2	—	2	—	—
Ingham.....	23	19	2	2	—	1	—	—	3	2	2	7	3	1
Ionia.....	10	7	1	1	—	—	1	—	—	—	—	4	3	—
Iosco.....	12	12	—	3	—	—	—	—	—	2	—	7	—	—
Iron.....	4	4	1	—	1	—	—	—	—	—	—	2	—	—
Isabella.....	7	7	—	2	—	2	—	—	1	1	—	—	—	—
Jackson.....	13	13	—	1	1	—	—	—	5	—	—	1	5	—
Kalamazoo.....	21	15	1	1	1	—	2	—	—	3	2	6	6	—
Kalkaska.....	3	2	1	—	—	—	—	—	—	—	—	—	—	1
Kent.....	77	63	8	5	4	1	—	—	7	7	3	28	14	—
Keweenaw.....	2	2	—	—	—	—	—	1	—	—	—	1	—	—
Lake.....	8	7	1	1	—	—	—	—	1	—	—	4	1	—
Lapeer.....	5	2	—	1	—	—	—	—	—	—	—	1	2	1
Leelanau.....	2	2	—	—	—	—	—	—	—	—	—	2	—	—
Lenawee.....	20	13	2	1	—	—	—	—	2	1	—	7	7	—
Livingston.....	10	8	1	1	—	—	—	—	1	—	—	5	2	—
Luce.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mackinac.....	2	—	—	—	—	—	—	—	—	—	—	—	2	—
Macomb.....	12	9	1	2	—	—	—	—	—	1	—	5	3	—
Manistee.....	26	23	—	6	2	—	—	—	—	3	2	10	2	1
Manitou.....	1	1	—	—	—	—	—	—	—	—	—	1	—	—
Marquette.....	37	34	1	6	—	—	—	10	—	4	—	13	3	—
Mason.....	15	14	—	3	—	1	—	—	—	2	1	7	1	—
Meosco.....	8	7	—	—	2	—	—	—	—	—	—	5	1	—

Table 100.—CONCLUDED.—Deaths from violence in Michigan, by counties, 1894.

Counties.	Total deaths from violence, 1894.	I.—Accidents.										II.—Suicides.	III.—Homicides.	
		Total.	Burning.	Drowning.	Gunshot.	Heat and sunstroke.	Lightning.	Mining.	Poison.	Railroad.	Vehicles, etc.			All others.
Menominee	28	26	—	9	2	—	2	—	—	1	—	12	2	—
Midland	5	4	1	1	—	—	—	—	—	—	1	1	1	—
Missaukee	2	2	—	—	—	—	—	—	—	—	—	—	—	—
Monroe	11	9	—	1	1	—	—	—	3	2	1	1	1	1
Montcalm	14	13	—	2	—	—	1	—	1	2	1	6	1	—
Montmorency	1	1	—	—	—	—	—	—	—	—	—	1	—	—
Muskegon	24	19	3	5	1	—	—	—	1	3	—	6	5	—
Newaygo	14	14	2	4	1	1	1	—	—	—	1	4	—	—
Oakland	19	13	—	1	—	1	—	—	1	2	—	3	6	—
Oceana	16	15	—	—	1	—	—	—	3	7	—	4	1	—
Ogemaw	2	2	—	1	—	—	—	—	—	—	—	1	—	—
Ontonagon	4	3	—	1	—	—	—	1	—	1	—	—	1	—
Oscoda	11	10	1	1	3	—	—	—	—	—	—	5	1	—
Otsego	1	1	—	—	—	—	—	—	—	—	—	1	—	—
Ottawa	25	22	1	8	1	1	—	—	—	3	1	7	3	—
Presque Isle	7	6	2	2	—	—	—	—	—	—	—	2	1	—
Rosecommon	1	1	—	—	—	—	—	—	—	—	—	1	—	—
Saginaw	43	32	—	6	4	—	—	—	2	4	4	12	10	1
Sanilac	8	6	1	1	—	—	1	—	—	—	—	3	2	—
Schoolcraft	21	19	2	9	—	—	—	—	1	2	—	5	1	1
Shiawassee	8	6	—	—	—	—	1	—	2	—	—	3	2	—
St. Clair	25	21	—	6	1	—	—	—	3	2	2	7	4	—
St. Joseph	15	11	—	1	1	—	—	—	—	1	1	7	3	1
Tuscola	15	11	1	1	2	—	—	—	1	—	2	4	3	1
Van Buren	15	13	6	1	—	—	—	—	—	—	—	6	2	—
Washtenaw	29	26	2	—	1	1	—	—	—	6	3	13	3	—
Wayne	195	175	15	29	12	7	—	—	6	13	10	83	18	2
Wexford	9	9	—	—	—	—	—	—	1	2	1	5	—	—

I.—ACCIDENTAL DEATHS, 1894.

Of the 1,020 deaths from accidental injuries in 1894, a large majority, 80½, were males; 216 were females. The preponderance of males exists in all the modes of injury shown in Table 102, except in the case of deaths from burning, lightning, and from poison, in which the proportion of the sexes is more nearly equal. The number of deaths reported from accidental causes shows little variation from year to year, the regularity being greater than in the case of deaths from disease. This is clearly indicated in Table 101, which shows the entire variation for twenty-five years, 1870-94, to have ranged between a death-rate of 38.5 per 100,000 population in 1870 and one of 52.9 per 100,000 population in 1881, a difference in rates of only 14.4 per 100,000. Of course the annual departure from the mean rate very seldom approaches half of the total range.

II.—SUICIDAL DEATHS, 1894.

There were 176 deaths from suicide reported in Michigan during the year 1894, or 67 more than the number recorded for the next highest year, 1893. The suicide death-rate was 7.9 per 100,000 population, the average for the twenty-five year period 1870-94 being 4.3. It was the highest since the beginning of registration in Michigan. The well understood effect of hard times in increasing the suicide death-rate is very apparent.

Although suicides, like all other deaths, are imperfectly registered in Michigan, comparison of the figures returned for successive periods of years, in which the same percentage of deficiency may be presumed to obtain, shows that the death-rate from this cause is increasing. It was 3.2 per 100,000 population for the five-year period, 1870-74; 4.0, 4.4, 4.8 and 5.4 for the following periods in order. Of course these rates are much below the truth, but the fact of increase seems to be clearly indicated.

In comparing the deaths from suicide by occupations and by nativity, the conclusion must not be hastily reached that the number of deaths recorded for any class shows the tendency to suicide of that class; the number of persons of the given occupation or nativity in the State must be taken into consideration. Thus nearly one-third of the suicidal deaths in the twenty years, 1874-93, were those of farmers, there being 470 out of a total of 1,602, or 29 per cent so reported. But, according to the tables of occupations of the State census of 1884, the latest data available on this subject and which may be taken as a fair average of the twenty-year period, the proportion of farmers to all other occupations was about 28 per cent. Thus the suicide death-rate of farmers appears to be but slightly, if at all, above the average suicide death-rate for all the inhabitants of the State.

The means of death employed by suicides for the year are stated in Table 99. Following are the nationalities and occupations of suicides in Michigan during 1894:

Born in Michigan, 44; New York, 27; Germany, 23; Canada, 14; Ohio, 12; Sweden, 8; England, 7; "America," 5; Holland, 4; Ireland, 3; Scotland, Bohemia, Vermont, Wisconsin, each 2; Denmark, Minnesota, Indiana, Maine, Connecticut, North Carolina, each 1; not stated, 15.

Farmers, 50; housekeepers, 26; laborers, 22; merchants, 6; agents, 3; peddlers, engineers, blacksmiths, druggists, watchmen, carpenters, teachers, jewelers, saloonkeepers and domestics, each 2; miner, mechanic, teamster, optician, cooper, mason, woodworker, clerk, fireman, milliner, stevedore, flier, lumberman, laundryman, produce dealer, barber, public officer, evangelist, minister, tinsmith, student, fruit grower, painter, machinist, bookkeeper, real estate dealer, each 1; unspecified occupations, 23.

III.—HOMICIDES, 1894.

The more general term homicide is employed instead of the word murder, usually found in the returns, because it is evident that in our loose and inaccurate records, where even the manner of death is not generally specified, any point that requires discrimination, as the legal status of a homicide, cannot be depended upon. Many deaths fail to be registered in Michigan from each cause, and it is probable that the number returned as homicides would be increased if all that occurred were properly recorded.

In Table 101, the numbers registered for each of the years 1870-94 may be conveniently compared, and also the rates per 100,000 population for each year. The years 1883-87 show the highest degree of prevalence for any continued period; the rates for the years 1886 and 1889 are maxima. The last five-year period, 1890-94, shows a mortality from this cause slightly below the average.

Table 101.—Deaths from violence in Michigan, accidental, suicidal, and homicidal, as returned for each of the years 1870-94; with proportions to deaths from disease and rates per 100,000 population; with averages for quinquennial periods.

Years and five-year periods.	Total deaths fr'm violence.		I. Accidental.		II. Suicidal.		III. Homicidal.		Rates per 100,000 population.			
	Number.	Rate per 1,000 deaths from disease.*	Number.	Per cent of violent deaths.	Number.	Per cent of violent deaths.	Number.	Per cent of violent deaths.	Total violence.	I. Accidental.	II. Suicidal.	III. Homicidal.
1870.....	495	56.1	456	92.1	34	6.9	5	1.0	41.8	38.5	2.9	.4
1871.....	539	68.1	490	90.9	40	7.4	9	1.7	44.1	40.1	3.3	.7
1872.....	541	48.1	498	92.1	35	6.5	8	1.5	43.0	39.6	2.8	.6
1873.....	685	58.1	629	91.8	39	5.7	17	2.5	52.8	48.5	3.0	1.3
1874.....	656	66.5	591	90.1	53	8.1	12	1.8	49.2	44.3	4.0	.9
1875.....	646	69.8	577	89.3	52	8.0	17	2.6	46.7	41.7	3.8	1.2
1876.....	747	75.4	681	91.2	54	7.2	12	1.6	52.1	47.5	3.8	.8
1877.....	654	64.9	575	87.9	66	10.1	13	2.0	44.0	38.7	4.4	.9
1878.....	691	69.6	617	89.3	63	9.1	11	1.6	45.0	40.2	4.1	.7
1879.....	697	60.5	621	89.1	59	8.5	17	2.4	43.9	39.1	3.7	1.1
1880.....	875	67.2	804	91.9	65	7.4	6	.7	53.5	49.1	4.0	.4
1881.....	966	60.7	895	92.7	57	5.9	14	1.4	57.1	52.9	3.4	.8
1882.....	778	58.2	704	90.5	62	8.0	12	1.5	44.6	40.3	3.6	.7
1883.....	940	68.8	831	88.4	91	9.7	18	1.9	52.2	46.2	5.1	1.0
1884.....	898	59.3	769	85.6	104	11.6	25	2.8	48.4	41.5	5.6	1.3
1885.....	907	65.9	787	86.8	91	10.0	29	3.2	47.9	41.6	4.8	1.5
1886.....	923	60.3	811	87.9	82	8.9	30	3.3	47.7	41.9	4.2	1.6
1887.....	1,044	64.2	910	87.2	105	10.1	29	2.8	52.9	46.1	5.3	1.5
1888.....	1,038	57.0	918	88.9	101	9.8	14	1.4	51.3	45.6	5.0	.7
1889.....	1,096	65.4	970	88.5	94	8.6	32	2.9	53.4	47.2	4.6	1.6
1890.....	1,065	61.6	963	88.8	108	10.0	14	1.3	51.8	46.0	5.2	.6
1891.....	993	54.8	899	90.5	79	8.0	15	1.5	46.6	42.2	3.7	.7
1892.....	1,144	65.1	1,020	89.2	107	9.4	17	1.5	52.8	47.1	4.9	.8
1893.....	1,175	65.6	1,050	89.4	109	9.3	16	1.4	53.3	47.6	4.9	.7
1894.....	1,213	71.5	1,020	84.1	176	14.5	17	1.4	54.1	45.5	7.9	.8
<hr/>												
1870-74.....	583	58.7	533	91.4	40	6.9	10	1.7	46.3	42.3	3.2	.8
1875-79.....	687	67.8	614	89.4	59	8.6	14	2.0	46.2	41.3	4.0	.9
1880-84.....	891	62.6	801	89.9	76	8.5	15	1.7	51.1	45.9	4.4	.9
1885-89.....	1,001	62.4	879	87.8	95	9.5	27	2.7	50.7	44.5	4.8	1.4
1890-94.....	1,122	63.6	990	88.2	116	10.3	16	1.4	51.8	45.7	5.4	.7

* Compared with line 2, Table 86.

VITAL STATISTICS OF MICHIGAN, 1894.

Table 102.—Exhibiting, by sex, by months, by specified causes in alphabetical order, and by ages in years (under 5) and in periods of years, the number of deaths returned for the year 1894. (Still-births included.)*

Sex.	Months of death, 1894.												Total deaths, 1894.	Years, under 5.					Ages of decedents, by five-year periods, 1894.																					
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.		Unknown.	0.	1.	2.	3.	4.	Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.	Unknown.			
Total.....	55	33	67	99	96	102	124	112	94	79	72	93	1 1020	44	37	23	24	12	140	65	53	90	98	79	89	76	54	53	57	40	57	23	20	23	22	26				
Males.....	46	20	46	78	70	83	96	95	73	66	54	73	1 804	20	17	12	13	6	68	51	42	82	79	60	78	68	46	48	34	36	31	19	16	18	10	22				
Females....	10	13	15	20	26	14	25	17	22	13	18	20	216	24	20	11	11	6	72	14	11	8	14	19	11	10	8	5	3	6	6	4	4	5	12	4				
Total.....	6	3	1	5	5	6	10	6	5	6	10	10	73		4	8	6	4	17	17	4	2	4	4	4	4	1	8	2	2	1	3	2	8	1	2	1			
Males.....	1	1	1	1	1	1	6	2	4	3	5	7	26		1	1	2	1	15	10	3	1	4	4	4	1	1	1	1	1	2	1	2	3	1	2	1			
Females....	5	3	1	4	4	5	4	4	4	3	5	7	47		3	2	4	3	12	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Total.....	5	1	7	11	25	33	41	21	19	8	2	9	182		1	4	8	8	17	18	25	30	28	16	14	7	6	8	2	3	2	1	1	1	1	2	2			
Males.....	4	1	7	10	20	31	26	21	14	8	2	9	183		1	3	4	1	9	18	23	29	26	14	13	6	7	7	7	2	2	1	1	1	1	1	2	2		
Females....	1	1	1	1	5	2	5	5	5	5	5	5	19		1	1	4	3	8	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Total.....	8	2	2	8	4	1	3	8	5	4	5	7	57						3	5	10	6	9	3	4	5	3	3	3	1	1	1	1	1	1	1	1	2		
Males.....	8	2	1	7	4	1	3	7	4	4	5	6	52						2	5	9	5	7	3	4	5	3	3	3	1	1	1	1	1	1	1	1	2		
Females....	1	1	1	1	1	1	1	1	1	1	1	1	5						1																			2		
Total.....	1				1	2	5	4	3	1			16		1	2		2	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2		
Males.....	1				1	1	4	2	3	1			12		1	2		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2		
Females....													4						4																					
Total.....					3	3	2	3	1				12						3	1	1	2	1	2	1	2	1	1	1	2	2									
Males.....					2	3	1	3	1				10						3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Females....					1	1	1	1					2																											
Total.....	1	2		4	2	2	6	4	1	3	3	2	30						1	3	4	9	4	4	4	4	4	4	4	1	2	1	1							
Males.....	1	2		4	2	2	6	4	1	3	3	2	30																											
Females....																																								
Total.....	3	1	5	5	10	2	6	5	9	10	2	8	61		4	6	5	1	16	4	2	6	8	3	3	4	4	2	3	3	1	1	1	1	1	1	1	1		
Males.....	2	1	3	3	5	1	3	2	5	5	2	3	31		3	3	1	1	8	3	1	2	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Females....	1	1	2	2	5	1	3	3	4	5	2	1	30		1	3	4		8	1	1	2	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Total.....	2	4	11	14	3	3	9	13	11	6	12	9	97		1	1	2	1	5	1	4	8	12	10	18	9	6	6	6	2	6	1	2	1	1	1	3	2		
Males.....	2	4	11	14	3	3	9	13	11	6	11	8	89		1	1	2	1	4	1	4	8	12	9	16	7	5	5	5	6	2	6	1	2	1	1	1	3	2	
Females....	2	2	3	3	3	3	9	13	11	6	11	8	89						1																					
Total.....	1	1	3	2	7	11	6	9	2	3	5	5	55		1	3	1		5	6	3	3	2	2	7	5	2	2	2	2	2	2	2	2	2	2	2	2	2	
Males.....	1	1	3	2	7	11	6	9	2	3	5	5	55		1	3	1		5	6	3	3	2	2	7	5	2	2	2	2	2	2	2	2	2	2	2	2	2	
Females....													47						2	5	3	2	2	6	4	2	2	2	2	2	2	2	2	2	2	2	2	2		
Total.....	29	19	32	48	35	38	37	40	41	38	33	43	437		37	17	6	11	4	75	16	9	27	31	30	32	41	24	23	18	19	22	13	11	14	16	16			
Males.....	23	13	25	37	28	31	23	31	34	24	33	1 844	18	9	5	7	2	41	15	5	23	27	23	28	36	21	21	17	17	17	11	10	10	7	13					
Females....	3	6	7	11	9	5	12	7	10	4	9	10	93		19	8	1	4	2	34	1	4	2	4	1	4	2	4	5	3	2	1	2	5	2	1	4	9	3	

Total.....	19	17	19	25	23	24	28	14	22	32	31	29	283	Apoplexy	3	1	4	2	5	1	8	11	15	15	29	30	38	35	38	31	19	2					
Males.....	11	9	8	11	13	16	13	7	9	12	10	12	167	"	2	1	2	5	1	3	8	9	7	19	19	26	18	28	17	9	2						
Females...	8	9	10	14	10	8	15	7	10	10	12	17	116	"	1	1	2	1	4	1	3	3	8	8	10	11	12	17	10	14	10						
Total.....	9	4	7	9	2	2	3	12	7	4	7	8	74	Asthma	3	1	5	1	1	1	1	1	2	5	6	9	17	12	2	2							
Males.....	6	4	3	8	2	1	6	4	3	2	6	6	45	"	3	1	1	1	1	1	1	1	1	3	5	7	12	6	6	1							
Females...	3	4	1	1	1	1	3	6	3	1	5	2	29	"	2	1	4	1	1	1	1	1	1	2	1	2	5	6	1								
Total.....	11	13	18	20	19	18	34	48	56	45	28	26	1	Bladder disease, etc.	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2						
Males.....	7	10	10	9	15	16	29	23	26	18	16	13	156	Bowel disease, etc.	90	17	9	4	3	123	9	17	11	15	12	14	7	16	11	8	15	30	9	8	12	2	
Females...	4	6	8	10	10	3	18	19	33	19	10	13	131	"	38	8	5	2	3	67	3	11	5	11	6	4	4	4	16	2	7	4	2				
Total.....	17	26	32	25	29	27	28	46	57	42	36	31	396	Bowels, Inflammation of	103	21	14	2	6	146	10	25	30	29	20	14	13	8	13	19	15	13	6	5	1		
Males.....	7	15	16	15	13	12	20	24	33	25	18	15	208	"	63	12	6	1	8	5	13	17	14	9	8	5	7	5	11	4	3	4	1	1			
Females...	10	11	16	10	16	15	8	22	24	22	18	16	188	"	40	9	8	1	2	60	5	12	13	15	11	5	8	6	3	8	11	8	2	4			
Total.....	14	5	14	20	21	24	17	21	18	24	24	26	125	Brain disease, etc.	24	12	2	1	1	40	7	1	3	8	19	3	16	13	21	20	16	19	11	4			
Males.....	10	3	9	11	7	15	13	7	12	16	11	10	126	"	9	6	2	1	18	4	4	2	3	11	9	7	14	11	8	13	8	9	3				
Females...	4	2	5	9	10	17	9	4	14	6	8	13	101	"	15	6	1	1	22	3	1	2	7	1	5	8	7	6	7	9	8	6	3	2	1		
Total.....	2	6	7	8	4	5	4	13	9	10	9	7	81	Brain, Congestion of	31	8	7	2	48	5	1	2	3	5	2	2	1	3	1	3	1	2	1				
Males.....	2	1	6	6	1	2	3	1	9	5	5	7	48	"	20	2	4	1	27	3	1	1	2	5	2	1	3	1	3	1	1	1	1				
Females...	5	1	2	3	3	1	3	4	4	5	2	33	"	11	6	3	1	21	3	1	1	1	2	1	1	1	1	1	1	1	1	1	1				
Total.....	24	15	24	38	22	22	26	28	34	26	19	23	1	Brain, Inflammation of	127	38	16	10	7	198	37	14	11	6	7	4	7	3	1	3	1	1	2	1			
Males.....	18	5	14	18	12	15	16	12	19	18	5	15	1	168	"	67	22	8	6	4	107	27	7	6	4	1	2	6	1	2	2	1	1	1			
Females...	6	10	10	20	10	7	10	16	15	8	14	8	134	"	60	16	8	4	3	91	10	7	5	2	6	2	1	2	1	1	1	1	1	1			
Total.....	18	11	18	11	16	10	8	11	11	16	30	174	Bronchitis	68	24	7	2	2	103	4	2	4	6	1	2	3	1	2	3	6	5	13	11	2			
Males.....	12	5	10	9	4	9	6	2	5	4	7	15	88	"	38	11	3	2	52	2	1	2	4	1	1	1	1	2	3	3	3	7	1	1			
Females...	6	6	4	9	7	7	4	6	6	7	9	15	86	"	32	13	4	2	51	2	1	2	2	1	1	2	2	3	2	3	6	7	1	1			
Total.....	1	1	2	1	1	2	1	1	1	3	1	1	13	Calculus	13																						
Males.....	1	1	2	1	1	1	1	1	1	3	1	1	12	"	12																						
Females...	1	1	1	1	1	1	1	1	1	1	1	1	1	"	1																						
Total.....	42	40	46	64	56	62	76	53	68	57	67	677	Cancer	2	1		3	3	2	5	11	25	27	63	76	77	81	89	78	65	35	30	7				
Males.....	18	24	17	25	18	24	28	22	24	20	27	269	"	2	1		3	1	3	2	5	11	25	27	63	76	77	81	89	78	65	35	30	7			
Females...	24	16	24	29	39	38	38	48	31	48	33	408	"	2	1		3	2	2	2	5	9	10	29	25	32	39	36	30	22	18	1	1	1			
Total.....	1	1	1	1	1	1	1	1	1	1	1	1	4	Chicken-pox	4																						
Males.....	1	1	1	1	1	1	1	1	1	1	1	1	4	"	4																						
Females...	6	13	24	22	18	25	14	13	17	15	23	22	1	Childbirth	135																						
Total.....	5	19	20	21	35	119	242	287	106	26	16	1	891	Cholera infantum	671	135	50	13	6	875	12	1	1	3	4	23	4										
Males.....	4	3	8	13	20	13	73	138	48	14	8	1	474	"	361	69	25	11	3	469	3	1	1	1	1	1	1	1	1	1	1	1	1	1			
Females...	11	2	11	7	9	15	46	109	129	58	12	8	417	"	310	66	25	2	3	406	9	1	1	1	1	1	1	1	1	1	1	1	1	1			
Total.....	133	146	201	207	262	192	159	185	180	184	206	189	2,206	Consumption	76	18	7	4	9	114	26	42	19	333	263	238	176	141	110	104	88	91	67	46	24	22	
Males.....	69	78	88	88	91	94	72	90	83	67	83	996	"	37	8	5	3	6	59	1	6	14	142	109	97	75	73	55	66	61	55	44	63	26	13	7	
Females...	84	68	113	119	111	98	87	95	97	117	113	106	2,120	"	39	10	2	1	3	55	15	86	155	191	154	141	101	68	55	88	41	38	47	34	20	11	15

* For total by month, see Table 75, p. 198; by age, Table 76, p. 204.

CAUSES OF DEATH—ALPHABETICAL LIST.

[illegible]

Table 102.—CONTINUED.—Causes of death—Alphabetical list.

Sex.	Months of death, 1894.												Total deaths, 1894.	Causes of death, 1894.	Years, under 5.					Ages of decedents, by five-year periods, 1894.																			
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.			Unknown.	0.	1.	2.	3.	4.	Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.		
Total.....	14	8	9	18	13	6	17	18	14	13	11	20	1	182	18	2	1	3	4	21	1	3	2	4	2	2	10	3	16	14	24	16	14	16	10	8	1	Unknown.	
Males.....	9	6	5	10	8	3	9	9	7	6	5	11	0	83	11	1	1	1	1	13	1	1	1	1	1	1	4	2	10	5	13	8	10	5	6	2	1	Unknown.	
Females.....	5	2	4	8	5	3	8	11	8	7	6	9	1	99	7	1	0	2	3	8	0	0	0	0	0	0	0	0	0	6	9	11	8	4	11	4	2	1	Unknown.
Total.....	7	9	4	5	9	3	1	3	8	6	10	11	81	38	29	7	2	2	2	42	1	1	1	1	1	1	1	2	1	4	3	1	3	5	5	5	1	Unknown.	
Males.....	4	4	2	3	5	2	1	2	4	3	4	6	38	16	16	3	1	1	1	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.	
Females.....	3	5	2	2	4	1	0	1	4	3	6	5	43	22	13	4	1	1	1	20	0	0	0	0	0	0	0	0	0	3	2	0	2	4	4	4	0	Unknown.	
Total.....	14	7	15	11	10	13	7	6	12	12	10	14	132	122	24	7	2	1	1	35	4	3	5	6	5	9	5	3	5	7	6	13	8	6	7	2	3	Unknown.	
Males.....	8	2	9	7	5	9	3	5	7	12	4	10	81	51	12	5	1	1	1	20	4	1	3	3	6	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.	
Females.....	6	5	7	4	5	4	2	1	5	0	6	4	51	41	12	2	0	0	15	0	2	2	3	3	2	3	4	2	2	3	2	1	5	5	2	1	1	Unknown.	
Total.....	7	5	8	4	4	5	14	5	8	9	11	12	92	92	86	3	1	1	1	90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.	
Males.....	2	3	4	2	3	3	8	4	4	5	6	6	47	47	44	2	1	1	1	41	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.	
Females.....	5	2	4	2	2	2	6	1	4	4	5	6	45	45	42	1	0	0	0	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Unknown.	
Total.....	4	5	12	16	25	9	2	5	3	2	1	1	84	84	27	20	9	7	2	65	6	1	2	3	1	3	1	1	1	1	1	1	1	1	1	1	1	Unknown.	
Males.....	1	1	6	11	12	3	1	3	2	1	1	1	40	40	13	10	6	3	1	33	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.	
Females.....	3	4	6	5	13	6	1	2	0	1	0	0	44	44	14	10	3	4	1	32	5	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	Unknown.	
Total.....	11	16	11	15	15	22	17	16	22	14	11	11	181	181	60	23	9	13	5	111	21	12	6	7	2	2	3	1	4	2	2	1	2	1	2	2	3	Unknown.	
Males.....	6	7	7	5	6	10	12	8	9	6	4	6	86	86	37	13	2	6	4	62	8	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.	
Females.....	5	9	4	10	9	12	5	8	13	8	7	5	95	95	23	12	7	7	49	13	9	5	4	1	1	1	2	1	3	1	1	1	2	0	0	0	Unknown.		
Total.....	2	2	3	2	5	5	5	1	6	1	4	3	41	41	20	9	4	2	35	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.		
Males.....	1	1	1	1	2	1	2	1	2	1	2	2	19	19	9	5	1	2	17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.		
Females.....	1	2	2	1	3	4	3	1	4	0	2	1	22	22	11	4	1	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Unknown.		
Total.....	62	57	43	52	72	51	62	60	56	76	59	66	1	707	1	1	1	1	1	3	3	9	3	4	5	8	16	18	37	49	57	84	82	113	111	94	11	Unknown.	
Males.....	35	31	23	30	38	34	29	34	24	48	31	37	1	400	1	1	1	1	1	1	5	2	2	1	6	12	15	23	27	29	45	45	55	67	56	8	0	Unknown.	
Females.....	27	26	15	22	34	17	23	26	32	28	28	29	1	307	1	0	0	0	2	2	4	1	2	4	2	2	4	3	14	22	28	39	37	58	44	38	3	Unknown.	
Total.....	4	4	8	3	9	12	2	11	8	11	8	8	88	88	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.	
Males.....	2	3	3	3	6	3	1	4	5	4	2	2	42	42	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	Unknown.	
Females.....	2	1	5	0	3	9	1	7	3	5	4	6	46	46	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Unknown.	
Total.....	6	1	3	10	7	11	7	12	18	10	6	16	102	102	2	4	2	3	11	6	8	9	8	13	7	7	5	3	7	4	5	3	7	4	5	1	1	Unknown.	
Males.....	2	1	1	3	4	3	4	3	4	3	4	5	35	35	2	2	1	1	4	1	4	5	3	2	2	2	1	3	1	3	1	4	3	2	1	1	1	Unknown.	
Females.....	4	0	2	7	4	8	4	9	14	6	2	11	67	67	0	2	1	2	7	5	4	3	4	5	11	4	4	4	4	3	2	2	3	1	2	4	0	Unknown.	

Total	4	1	3	2	2	2	3	2	6	8	29	Pleurisy	2	1	1	4	1	1	2	1	2	1	2	1	2	1	2	1	3	3	1	1	4	3	---	
Males	3	1	2	1	2	1	2	1	5	1	17	"	2	1	1	3	1	1	2	1	2	1	2	1	2	1	2	1	3	1	1	4	3	---		
Females	1	---	---	---	---	---	---	---	---	---	12	"	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Total	119	138	140	135	99	79	40	53	52	98	1,200	Pneumonia	249	90	46	21	21	427	36	21	38	39	43	38	41	47	58	54	41	60	69	72	82	47	9	
Males	61	74	73	59	61	44	23	29	28	56	53	"	149	45	24	10	11	239	15	10	20	20	23	24	25	35	36	23	33	39	37	23	36	4		
Females	58	59	67	46	38	35	17	24	24	37	49	"	100	45	22	11	10	183	21	11	18	19	15	13	15	22	23	18	27	30	33	30	21	5		
Total	11	4	12	9	8	4	3	6	4	9	7	Premature birth	72	---	---	---	72	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9	3
Males	7	4	8	4	3	2	2	4	2	4	2	"	38	---	---	---	38	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6	
Females	4	4	4	5	1	2	1	2	2	5	5	"	34	---	---	---	34	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Total	13	11	18	12	10	11	10	9	20	11	15	Rheumatism	2	1	---	---	4	8	7	4	6	5	6	5	6	8	13	10	16	16	8	13	9	3		
Males	8	7	6	10	8	8	6	4	10	9	8	"	---	---	---	---	4	6	5	3	3	1	2	3	4	7	8	13	6	9	5	2	1	---		
Females	5	4	5	2	2	3	4	5	10	2	7	"	2	1	---	---	4	2	2	1	3	4	4	3	2	5	7	7	3	2	4	4	1	---		
Total	8	14	8	11	14	17	16	6	13	16	17	Septicæmia	17	---	---	---	24	6	7	6	15	16	15	8	5	7	7	8	6	9	7	3	4	1	---	
Males	4	4	8	5	7	5	7	5	2	7	8	"	7	---	---	---	22	11	4	2	2	2	2	3	4	4	4	4	4	4	3	3	2	3		
Females	4	10	5	6	11	9	10	11	4	6	8	"	10	---	---	---	2	1	13	2	3	4	13	10	5	3	4	4	2	6	4	1	1	---		
Total	3	1	2	3	2	3	3	3	3	3	2	Scrofula	7	1	1	---	10	2	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Males	2	1	---	---	---	---	---	---	---	---	---	"	4	1	---	---	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Females	1	---	---	---	---	---	---	---	---	---	---	"	3	---	---	---	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Unknown	---	---	---	---	---	---	---	---	---	---	---	"	1	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Total	2	1	3	5	17	4	4	4	10	18	17	Small-pox	11	---	---	---	19	9	7	12	14	7	1	4	3	2	1	1	1	1	1	1	1	8		
Males	1	1	---	---	---	---	---	---	---	---	---	"	4	---	---	---	5	7	4	8	10	6	1	3	---	---	---	---	---	---	---	---	---	---		
Females	1	---	---	---	---	---	---	---	---	---	---	"	7	---	---	---	14	2	3	4	4	1	---	---	---	---	---	---	---	---	---	---	---	---		
Total	8	6	12	8	6	3	4	10	10	11	9	Spine disease, etc.	37	12	4	4	63	6	2	7	1	2	1	1	2	3	1	4	1	4	1	1	2	---		
Males	5	2	4	2	1	3	6	5	8	5	4	"	27	8	2	1	42	3	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Females	3	---	---	---	---	---	---	---	---	---	---	"	10	4	2	3	21	3	2	5	1	1	1	1	1	1	1	1	1	1	1	1	1	---		
Total	73	64	85	89	98	92	76	82	64	78	106	Still-births	1002	---	---	---	1002	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Males	41	33	53	58	63	60	47	54	61	54	61	"	549	---	---	---	549	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Females	26	24	29	33	35	31	25	33	49	39	42	"	402	---	---	---	402	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Unknown	6	5	5	3	4	4	5	4	5	4	6	"	51	---	---	---	51	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Total	7	10	11	20	17	10	15	20	22	8	15	Stomach disease, etc.	41	8	3	2	57	2	2	9	2	2	---	---	---	---	---	---	---	---	---	---	---	---	---	
Males	2	5	12	6	12	7	7	10	11	13	6	"	21	7	1	1	36	1	1	4	2	---	---	---	---	---	---	---	---	---	---	---	---	---		
Females	5	5	5	8	5	10	3	9	9	2	12	"	14	1	2	1	21	2	1	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Total	1	3	9	6	9	10	4	9	7	9	5	Stomach, Inflammation of	8	2	1	1	15	1	2	3	4	2	8	2	4	7	4	7	4	7	3	3	---	---		
Males	1	1	4	3	6	4	2	5	3	5	4	"	4	3	1	1	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Females	1	2	5	3	3	6	2	4	4	4	1	"	4	---	---	---	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Total	10	8	14	12	20	15	20	16	17	15	17	Suicide	176	---	---	---	176	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Males	9	6	11	8	14	10	13	14	15	9	10	"	134	---	---	---	134	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Females	1	2	3	4	6	7	5	2	2	6	7	"	42	---	---	---	42	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Total	2	2	7	4	8	3	2	2	1	1	1	Syphilis	13	1	---	---	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Males	1	1	3	4	1	2	2	---	---	---	---	"	6	---	---	---	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Females	1	1	4	---	5	1	---	---	---	---	---	"	7	---	---	---	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		

Table 102.—CONCLUDED.—Causes of death—Alphabetical list.

Sex.	Months of death, 1894.												Total deaths, 1894.	Causes of death.	Years, under 5.					Ages of decedents, by five-year periods, 1894.																		
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.			Unknown.	0.	1.	2.	3.	4.	Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 70.	70 to 75.	75 to 80.	80 and over.		
Total.....	2	4	1	1	4	5	7	7	7	8	6	5	57	8	4	1	13	1	13	1	1	2	7	4	1	2	3	4	3	4	3	5	2	4	1	2	1	Unknown.
Males.....	1	2	1	1	3	4	4	4	5	5	3	4	27	7	3	—	10	—	8	—	1	2	3	1	—	—	—	3	4	3	5	2	4	1	—	—	—	
Females.....	1	2	—	—	1	1	3	3	2	3	3	1	30	1	1	—	3	1	3	—	—	—	4	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total.....	1	2	1	1	2	2	1	2	1	1	1	4	14	—	—	—	1	1	1	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males.....	—	1	2	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Females.....	1	—	—	1	2	2	1	2	1	1	1	4	13	—	—	—	1	1	1	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Total.....	4	5	16	11	12	13	11	15	17	13	13	19	149	8	—	—	8	2	8	2	2	2	2	2	16	17	9	13	14	14	7	13	9	13	4	4	—	
Males.....	2	1	3	5	3	2	5	6	4	1	4	5	41	7	—	—	7	—	7	—	—	—	—	6	5	2	4	2	4	2	1	2	2	5	1	3	—	
Females.....	2	4	13	6	9	11	6	9	13	12	9	14	108	1	—	—	1	2	1	2	2	1	10	12	7	13	10	12	6	11	7	8	3	1	—	—	—	
Total.....	112	104	140	147	133	117	150	137	161	166	146	141	2	310	50	11	2	3	376	19	22	24	28	28	23	31	29	32	30	29	49	48	140	179	152	17	—	
Males.....	65	56	78	70	76	62	74	69	79	93	76	74	2	175	30	8	1	3	212	13	11	6	14	5	6	9	10	18	17	17	26	33	63	94	257	13	—	
Females.....	47	48	62	77	57	55	76	68	82	73	70	67	892	185	20	8	1	164	6	11	18	14	23	17	22	19	14	13	12	23	15	77	85	265	4	—		
Total.....	105	123	113	143	165	138	129	131	166	153	129	138	5	1004	90	32	9	7	1142	22	19	17	21	23	19	28	25	16	30	16	34	34	46	44	66	84	—	
Males.....	56	71	58	75	89	68	73	89	96	86	58	79	2	541	48	16	3	7	615	10	6	7	10	7	9	12	8	11	10	18	18	26	24	30	45	—		
Females.....	49	52	55	68	76	70	56	91	76	87	70	59	2	461	42	16	6	1	525	12	13	11	14	13	12	19	13	8	19	6	16	16	20	30	36	37		
Unknown.....	1	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total.....	8	4	5	15	8	14	18	27	12	13	17	17	158	99	35	9	7	3	153	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Males.....	3	2	2	8	3	4	7	13	4	6	9	9	70	45	16	4	3	68	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Females.....	5	2	3	7	5	10	11	14	8	7	8	8	88	54	19	5	4	85	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

* Exclusive of consumption, marasmus, tubercular meningitis, tabes mesenterica and scrofula.

† See list of diseases included under this head on page 302.

Table 103.—Occupations, by sex, of decedents aged twenty years and over in Michigan during the year 1894, showing the principal causes of death and the ages at death by five-year periods.

[illegible]

Males	1	3	2	1	1	3	9	20	Coopers	1	3	1	1	2	2	2	2	4
Males	1	1	1	1	1	1	1	2	Corliss makers	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	2	Costumers	1	1	1	1	1	1	1	1	1
Males	1	1	2	2	2	2	2	4	Decorators	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	2	Dentists	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	2	Detectives	1	1	1	1	1	1	1	1	1
Males	10	13	8	39	14	18	75	186	Ditchers	46	25	16	11	8	7	14	7	8
Females	1	2	1	1	1	1	1	14	Domestics	1	1	1	1	1	1	1	1	1
Males	5	7	11	3	1	1	1	33	Draftsmen	7	6	6	2	5	2	1	1	1
Females	1	1	1	1	1	1	1	4	Draymen	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	4	Dressmakers	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	4	Drivers	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	8	Drugists	2	2	2	1	3	2	2	2	1
Males	2	2	2	2	2	2	2	21	Editors	1	1	1	1	1	1	1	1	1
Males	3	2	2	2	2	2	2	2	Electricians	2	2	2	2	2	2	2	2	2
Males	3	2	4	4	6	1	11	45	Engineers	2	2	6	5	5	2	6	5	1
Males	1	1	1	1	1	1	1	2	Expressmen	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Factory hands	1	1	1	1	1	1	1	1	1
Females	111	288	182	255	196	220	792	2,396	Farmers	108	73	89	95	82	107	163	244	370
Males	10	41	27	48	35	28	183	346	"	12	15	20	18	14	19	21	34	48
Females	1	1	1	1	1	1	1	1	Fillers	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Finishers	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Fishermen	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Fishermen	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Fitters	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Flour packers	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Foremen	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Fruit growers	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Furriers	1	1	1	1	1	1	1	1	1
Males	1	3	1	1	1	3	5	21	Gardeners	2	2	2	2	1	2	2	3	5
Females	1	1	1	1	1	1	1	2	"	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	2	Gilders	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	2	Grain buyers	1	1	1	1	1	1	1	1	1
Males	4	2	2	2	2	2	2	15	Grocers	1	1	1	1	2	1	2	3	2
Females	1	1	1	1	1	1	1	1	"	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Gunsmiths	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Hackmen	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Harnessmakers	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Horsemen	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Hostlers	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Hotel keepers	1	1	1	1	1	1	1	1	1
Females	1	1	1	1	1	1	1	1	Hucksters	1	1	1	1	1	1	1	1	1
Males	1	1	1	1	1	1	1	1	Inspectors	1	1	1	1	1	1	1	1	1

Table 103.—CONTINUED.—Occupations, by sex, of decedents in Michigan during the year 1894.

Sex.	Causes of death, 1894.										Occupations of decedents, 1894.	Ages at death, in periods of years, 1894.												
	Brain dis- eases.	Cancer and tumor.	Consump- tion.	Lung dis- eases.	Heart dis- eases.	Kidney dis- eases.	Typhoid fever.	Violence.	All other causes.	Total.														
	Bowel dis- eases.											20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 and over.
Males	1	1		1	2				1	5	Insurance agents.							1						
Males	1								1	1	Investors.							1						1
Males	2	3	5	1	2		1	2	5	22	Janitors.	1	1		2	4	1	1	3			2	3	
Males											Jewelers.													
Males	40	64	156	1	60	26	35	152	219	832	Journalists.	96	85	1	66	72	69	71	71	64	72	52	46	52
Females	1	1	4	4	2	4			10	39	Laborers.	4	4	4	4	4	2	3	4	2	1	3	3	1
Males								1		1	Lathers.	1												
Males	1						1	1		2	Laundrymen.		1		3	3	7	8	1	1	1	4	6	4
Males		6	5	5	4	1	1	2	10	34	Lawyers.	1	1											
Males					1					1	Lighthouse keepers.							1						
Males								1		1	Linenmen.	1												
Males		2	1	1			1			7	Liverymen.			1			2	1	1					1
Males		4	3	1	3	2	2	1	5	23	Longshoremen.	2	2		2	2	2	3	4	1		4		1
Males	1									1	Lumber inspectors.						1							
Males	1	5	2	4	5			4	7	31	Machinists.	2	4	4	2	3	4	3	1	2	2	3	1	
Males	2	1	3	3	3		1	1	6	20	Mailing clerks.	1	2	1	1	3	2	2	1	3	3	1		2
Males	1	6	2	7	6	5	1	10	14	57	Manufacturers.	2	4	4	1	1	6	5	7	5	3	3	10	7
Males										23	Masons.													
Males	2	2	2	3	2	2	1	2	11	23	Mechanics.			1	4			1	3	4	4	7	2	3
Males	6	17	13	15	11	12	2	9	40	136	Merchants.	1	1	13	10	10	11	15	7	17	14	12	11	14
Females		1					1		3	5	"							1	1	2				
Males			1		1					1	Measurers.						1							
Males		1							2	1	Messengers.						1							
Males		2	5	2	2	6	1	1	11	35	Milk men.											1		1
Males										2	Millers.	3	1	4	2	3	1	3	2	3	7	3	1	3
Females			1						1	2	"													
Males								2		5	Mill men.			4					1					
Females	1	2	2	1	1	1		1	1	9	Milliners.	1	2	1				1	3					
Males					2					2	Millwrights.													
Males	2	2	4	8	1	3	4	37	7	82	Miners.	8	10	13	12	8	8	8	4	4			1	1

Table 103.—CONCLUDED.—Occupations, by sex, of decedents in Michigan during the year 1894.

Sex.	Causes of death, 1894.										Occupations of decedents, 1894.	Ages at death, in periods of years, 1894.													
	Bowel diseases.	Brain diseases.	Cancer and tumor.	Consumption.	Lung diseases.	Heart diseases.	Kidney diseases.	Typhoid fever.	Violence.	All other causes.		Total.	20 to 25.												
														25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to and over.
Males	2	9	1	4	1	1	1	1	2	2	5	1	1	1	1	1	1	1	2	7	10	2	4	1	
Males	3	3	1	2	1	1	1	1	18	1	46	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Males	1																								

[illegible]

RELATIONS OF OCCUPATIONS OF DECEDENTS TO CAUSES OF DEATH.

Formerly a table showing average ages of decedents, by occupation, was given in the Michigan Registration Reports. This was very misleading so far as the comparative healthfulness of various occupations was concerned, and very defective, in that no study was made of the effect of occupation upon the causes of death. It was discontinued in the Report for 1893, with the intention that a new table of a more satisfactory form should be given in the Report for 1894, which year would possess a substantial basis of comparison in the statements of population, by occupations and ages, given by the State census.

In accordance with this plan, Tables 103, 104 and 105 are now presented. Table 103 shows that of the 11,644 persons who died in Michigan during the year 1894 aged 20 years and over, 6,042 were engaged in specified occupations. Only 764 decedents of specified occupations were females. The number of decedents, by sex, of each specified occupation, who died at each quinquennial period of age over 20 years is shown, and also the number of deaths in each occupation from certain important diseases and groups of diseases.

In Table 104, the most important occupations of each sex are given in connection with the percentages of deaths from different diseases and groups of diseases to total mortality of each occupation. Such a table must evidently be used with great caution, both from the small numbers of decedents in many of the specified occupations, and also from the fact that all percentage comparisons with total mortality are apt to be misleading. The general indications are perhaps reliable, or, at least, very suggestive of conclusions which additional evidence will either corroborate or disprove. Thus we notice that for all specified occupations as a whole the per cent of deaths from consumption is 13, while the following occupations show per cents at least twice as great as the average: agents, 27; barbers, 43; bartenders, 40; bookkeepers, 39; cigar makers, 30; clerks, 28; harness makers, 27; molders, 30; printers, 29. On the other hand, the occupations showing the least mortality from consumption (less than 50 per cent of the average) are as follows: brakemen, 5; gardeners, 5; lumbermen, 4; physicians, 5; tailors, 5. Here there appears to be a general agreement with common observation as to the healthfulness of certain occupations, but one or two rates seem anomalous. It is safe to say that the low per cent of mortality of tailors from consumption is merely an accidental circumstance, and that another year's statistics may show quite a different result. Whether physicians, who are frequently exposed to infection with the tubercle bacillus, have accustomed themselves to unusual care in avoidance of infection, thus causing the very low per cent of deaths from this cause, or whether, as in the case of the tailors, the results for the present year are not characteristic of the usual prevalence of the disease, cannot be certainly told without further observation.

Average ages at death are also given in this table for each occupation, but have very little significance in many cases. It should always be considered, in referring to them, whether the particular occupations in question are made up of young men, men of middle age, or elderly men. Thus bankers are, as a rule, more advanced in life, for obvious reasons, than brakemen, and the ages of decedents of these occupations show a similar difference. It is utterly absurd to derive any inferences as to comparative healthfulness of occupations from a cursory comparison of average ages at death.

Table 104.—*Showing, by sex, the proportions of decedents of specified occupations,* from certain causes of death, together with the approximate average age at death of each occupation, according to the returns in Michigan for 1894.*

Occupations.	Deaths from all causes over 20 years of age.	Causes of death,—per cent of all causes.										Approximate average age at death in years.†
		Bowel diseases.	Brain diseases.	Cancer and tumor.	Consumption.	Lung diseases.	Heart diseases.	Kidney diseases.	Typhoid fever.	Violence.	All other causes.	
MALES.												
Total decedents over 20 years of age.....	6,215	4	12	5	13	9	11	6	3	11	27	56.8
Specified occupations.....	5,278	4	12	5	13	9	8	6	3	11	29	56.9
Unspecified occupations.....	937	1	11	5	16	9	28	5	1	9	14	55.9
Agents.....	11	9	—	9	27	—	27	9	—	9	9	55.7
Bakers.....	15	20	7	—	13	13	7	—	13	20	7	50.4
Bankers.....	10	—	40	—	10	—	10	—	—	—	40	65.8
Barbers.....	28	—	7	4	43	7	7	7	4	7	14	40.0
Bartenders.....	10	20	—	—	40	20	—	10	—	—	10	30.5
Blacksmiths.....	58	5	10	7	10	14	9	—	2	7	36	67.0
Bookkeepers.....	33	—	12	—	39	3	3	3	12	6	21	39.0
Brakemen.....	20	—	5	—	5	5	—	5	5	75	—	32.0
Butchers.....	25	8	16	4	12	4	8	8	12	4	24	53.3
Cabinet makers.....	21	5	14	—	24	10	14	10	5	—	19	45.4
Capitalists.....	20	—	35	5	—	—	10	10	—	—	40	70.2
Carpenters.....	202	3	13	5	13	8	5	8	2	8	34	58.2
Cigar makers.....	10	—	40	—	30	—	10	—	10	—	10	40.0
Clergymen.....	36	11	11	3	11	6	6	17	—	11	25	61.8
Clerks.....	53	4	13	—	28	9	8	4	6	13	16	38.1
Commercial travelers.....	12	—	25	17	—	8	8	—	8	25	8	45.0
Conductors, railroad.....	10	—	10	—	10	—	10	—	—	30	40	41.0
Contractors.....	20	—	10	10	15	10	15	—	—	—	40	59.5
Coopers.....	20	5	15	—	10	—	—	5	—	15	45	60.6
Draymen.....	14	7	14	—	—	—	7	—	7	7	57	55.7
Druggists.....	21	—	5	5	19	—	5	14	5	10	38	46.3
Engineers.....	45	7	4	9	9	13	2	2	9	20	24	50.3
Farmers.....	2,396	5	12	6	11	8	9	7	2	7	33	62.7
Firemen.....	16	—	—	—	13	—	6	—	—	69	13	31.9
Gardeners.....	21	5	14	14	5	5	—	14	10	10	24	60.6
Grocers.....	15	—	27	13	13	13	13	7	—	—	13	55.5
Harness makers.....	11	9	18	—	27	18	9	—	—	—	18	53.9
Hotel keepers.....	16	—	19	6	19	13	—	13	—	—	31	62.7
Jewelers.....	22	9	14	5	23	5	9	—	5	9	23	58.0
Laborers.....	882	5	7	4	18	11	7	3	4	17	25	49.7
Lawyers.....	34	—	18	—	15	15	12	3	3	6	29	39.0
Lumbermen.....	23	—	17	13	4	—	13	9	9	13	22	54.8
Machinists.....	31	3	16	6	10	13	16	—	—	13	23	46.7
Manufacturers.....	20	10	15	5	10	13	15	5	5	5	30	53.3
Masons.....	57	2	11	4	9	12	11	9	2	18	25	60.2
Mechanics.....	25	—	8	—	8	12	8	8	4	8	44	64.5
Merchants.....	136	4	13	8	10	11	8	9	1	7	29	53.2
Millers.....	35	9	6	6	14	6	6	17	3	3	31	55.2
Miners.....	82	2	2	5	17	10	1	4	5	45	9	42.1
Molders.....	10	—	10	—	30	40	—	—	—	10	10	37.5
Painters.....	50	2	10	4	20	6	12	6	2	16	22	50.5
Peddlers.....	12	—	17	—	8	—	8	—	—	42	25	55.3
Physicians.....	43	—	16	2	5	9	2	9	5	2	49	60.4
Printers.....	17	—	6	—	29	12	—	6	18	12	18	39.6
Public officers.....	19	—	5	16	16	11	5	16	5	11	16	60.6
Railroad men (unspecified).....	30	7	13	7	10	3	3	3	—	34	20	42.3
Real estate dealers.....	13	8	31	—	9	15	8	—	—	15	15	58.5
Sailors.....	40	3	13	—	13	5	5	8	3	30	28	43.8
Salesmen.....	20	—	25	5	20	10	5	20	5	5	5	42.0
Saloon keepers.....	37	—	19	—	13	8	13	8	3	19	16	46.6

* Only those occupations having at least 10 deaths recorded for the year are represented in this list.

† Assuming that decedents are uniformly distributed through the 5-year periods given in Table 103, adding one-half year for each decedent for months omitted in statement of ages, and taking the average age of all decedents over 80 at 85 years (agreeable to observation of Table 78).

Table 104.—CONCLUDED.—*Causes of death, by occupations, 1894.*

Occupations.	Deaths from all causes over 20 years of age.	Causes of death,—per cent of all causes.										Approximate average age at death in years. ¹
		Bowel diseases.	Brain diseases.	Cancer and tumor.	Consumption.	Lung diseases.	Heart diseases.	Kidney diseases.	Typhoid fever.	Violence.	All other causes.	
MALES.—Concluded.												
Shoemakers.....	46	4	20	4	9	2	4	11	2	4	39	69.5
Tailors.....	21	5	24	—	5	5	14	—	—	43	—	65.2
Teachers.....	12	—	8	8	28	8	—	—	17	—	23	43.8
Teamsters.....	27	11	—	4	11	22	4	11	—	19	19	52.4
Woodmen.....	20	5	—	5	20	10	5	5	—	45	5	43.0
FEMALES.												
Total decedents over 20 years of age.....	5,429	5	10	9	17	8	10	2	3	3	34	55.3
Specified occupations.....	764	5	9	7	21	3	6	3	3	2	35	50.5
Unspecified occupations.....	4,665	4	10	9	17	7	10	2	2	3	34	56.0
Clerks.....	12	8	—	8	33	17	8	8	—	8	8	30.0
Domestics.....	186	5	7	4	21	8	7	2	2	4	40	42.6
Dressmakers.....	33	15	—	21	33	9	—	3	3	3	12	36.6
Farmers.....	346	8	12	8	14	10	8	3	2	2	38	60.4
Music teachers.....	10	—	40	—	50	—	—	—	—	—	10	36.5
Seamstresses.....	13	8	—	8	38	—	—	8	—	—	38	41.2
Tailors.....	10	—	10	—	30	10	—	10	—	—	40	58.1
Teachers.....	42	7	10	7	38	7	5	5	2	2	21	34.1

The only correct method of measuring the comparative healthfulness of various occupations is to compare the rates of decedents at each period of age calculated upon the corresponding numbers of inhabitants of like age and occupation. Practically this is very difficult, for neither the vital statistics nor the census obtain satisfactory returns of occupations. An attempt to make such a statement, the first of the kind for Michigan, is given in Table 105, but, for the reasons stated, the results should be used with great caution. The principal age-period used, 20 to 60 years, inclusive, is far too long, but as the census data were so compiled, there is no other basis of comparison. The classification of occupations is in a chaotic condition, and it is quite impossible in many cases to be sure that all persons of a specified occupation as returned in the deaths, are included in the population as reported by the census. The distinction of employed and employer is very important, but it is a vain refinement to insist upon it in connection with data otherwise so imperfect. On the whole, the rates of certain well-defined occupations, whose general age-distribution is about the same, may be compared with some confidence, but the table is rather valuable as a suggestion for future development than for its present indications.

Table 105.—*Mortality of occupations in Michigan, 1894.*

Occupations.*	Population, June 1, 1894.			Deaths returned, 1894.			Death-rates per 1,000 inhabitants of same age, sex and occupation.		
	All ages.†	Aged 20 to 60 years.	Aged 60 years and over.	All ages.†	Aged 20 to 60 years.	Aged 60 years and over.	All ages.†	Aged 20 to 60 years.	Aged 60 years and over.
MALES.									
Total aged 20 years and over.....	672,068	585,723	86,395	6,215	3,146	3,069	9.2	5.4	35.5
Specified occupations.....	597,789	533,942	63,847	5,278	2,668	2,610	8.8	5.0	40.9
Unspecified occupations.....	74,269	51,781	22,488	937	478	459	12.6	9.2	20.4
Agents and real estate dealers.....	4,206	3,716	492	24	11	13	5.7	3.0	26.4
Bakers.....	1,479	1,404	75	15	9	6	10.1	6.4	80.0
Bankers.....	500	398	107	10	4	6	20.0	10.2	56.0
Barbers.....	2,980	2,980	60	28	25	3	9.4	8.4	50.0
Blacksmiths.....	6,845	6,168	677	58	19	39	8.5	3.1	57.6
Bookkeepers.....	3,897	3,755	142	38	28	5	8.5	7.5	35.2
Brakemen.....	1,572	1,567	5	20	20		12.7	12.8	
Butchers.....	3,508	3,346	163	25	14	11	7.1	4.2	67.5
Cabinet makers.....	1,474	1,315	159	21	13	8	14.2	9.9	50.3
Carpenters.....	19,246	16,478	2,768	202	83	119	10.5	5.0	43.0
Cigar makers.....	2,070	2,020	50	10	10		4.8	5.0	
Clergymen.....	3,019	2,592	427	36	16	20	11.9	6.1	46.8
Clerks.....	12,045	11,614	231	78	68	5	6.1	5.8	21.6
Commercial travelers.....	3,107	2,975	132	12	11	1	3.9	3.7	7.6
Conductors, railroad.....	1,116	1,108	13	10	9	1	9.0	8.2	76.9
Contractors, builders and.....	643	577	66	25	12	13	38.9	20.8	197.0
Coopers.....	1,690	1,399	291	20	8	12	12.0	5.8	41.2
Draymen and teamsters.....	10,245	9,697	548	49	34	15	4.8	3.5	27.4
Engineers and firemen.....	8,759	8,419	340	61	46	15	7.0	5.5	44.1
Farmers.....	198,147	161,422	36,725	2,396	854	1,542	12.1	5.2	42.0
Gardeners.....	2,827	2,085	762	21	9	12	7.4	4.4	15.7
Grocers.....	5,005	4,513	492	15	9	6	3.0	2.0	12.2
Harness makers.....	1,389	1,257	132	11	5	6	7.9	4.0	45.5
Hotel keepers.....	1,715	1,501	214	16	7	9	9.3	4.7	42.1
Laborers.....	62,611	57,548	5,063	882	596	286	14.1	10.4	5.6
Lawyers.....	2,229	1,989	240	31	18	16	15.3	9.0	66.7
Lumbermen and woodmen.....	10,864	10,594	270	43	32	11	4.0	3.0	40.7
Machinists.....	4,467	4,274	193	31	23	8	4.8	5.4	41.5
Manufacturers.....	1,148	1,019	129	20	11	9	17.4	10.8	69.8
Masons.....	5,068	4,461	607	57	29	28	11.2	6.5	46.1
Merchants.....	21,094	19,280	1,814	158	82	76	7.5	4.2	41.4
Millers.....	1,746	1,562	184	35	18	17	20.0	11.5	92.4
Miners.....	10,069	9,854	215	82	71	11	8.1	7.2	51.1
Molders.....	2,029	1,956	73	10	9	1	4.9	4.6	13.7
Painters.....	6,786	6,390	396	50	34	16	7.4	5.3	40.4
Peddlers and hucksters.....	2,130	1,855	275	13	8	5	6.1	4.3	18.1
Physicians.....	3,388	2,887	446	43	22	21	12.9	7.6	47.1
Printers.....	2,314	2,284	50	17	14	3	7.3	6.2	60.0
Public officers.....	2,374	2,047	327	19	6	13	8.0	2.9	39.8
Railroad men (unspecified).....	13,448	13,046	400	30	24	6	2.2	1.8	15.0
Sailors.....	2,880	2,762	98	40	33	7	14.0	11.9	71.4
Saloon keepers and bartenders.....	4,920	4,821	99	47	42	5	9.6	8.7	50.5
Shoemakers.....	2,413	1,786	569	46	9	37	19.1	5.0	65.0
Tailors.....	2,303	2,028	275	21	5	16	9.1	2.5	58.2
Teachers.....	2,563	2,504	59	12	9	3	4.7	3.6	50.8
FEMALES.									
Total aged 20 years and over.....	604,560	530,696	73,864	5,429	3,119	2,310	9.0	5.9	31.3
Specified occupations.....	58,166	58,104	2,062	764	472	292	13.1	8.4	141.6
Unspecified occupations.....	546,394	474,592	71,802	4,665	2,647	2,018	8.5	5.6	28.1
Clerks.....	2,983	2,972	11	15	14	1	5.0	4.7	90.9
Dressmakers.....	8,630	8,438	193	38	30	3	3.8	3.6	15.6
Music teachers.....	1,040	1,081	9	10	10		9.6	9.7	
Seamstresses.....	1,075	1,025	50	13	11	2	12.1	10.7	40.0
Tailors.....	807	726	81	10	5	5	12.4	6.9	61.7
Teachers.....	8,108	8,063	40	42	40	2	5.2	5.0	50.0

* Only those occupations having at least 10 deaths recorded for the year are given in this list.

† Exclusive of ages under 20 years, and unknown age. The data on population were taken from MS. tables of the State census before final revision, and are subject to correction when the figures of the completed report appear.

CLIMATIC CONDITIONS AFFECTING CAUSES OF DEATH.

It is impossible to give a satisfactory account of this subject at the present time as certain very important data, namely, the absolute numbers of deaths that occurred in each month of the registration year from each cause, are not known. The numbers given in Table 84 are known to be imperfect, and to be more deficient for the early months of the year than for the later months. For this reason the comparisons formerly made of the deaths returned by months from certain causes with meteorological data for the same months are not given from certain causes with meteorological data for the same months are not given. Instead a somewhat fuller series of tables of meteorological data than usual is taken from the last report of the Secretary of the State Board of Health (for 1893), to which, by the kindness of Dr. Baker, the corresponding data for 1894 (not yet printed) have been added. These reports have long been indebted for excellent meteorological data to the State Board of Health, and it is hoped that the time may soon come, with the passage of a satisfactory registration law, when mortality and meteorological conditions may be directly compared without risk of the serious errors to which such comparison is now liable.

It was noted with pleasure in the last report that the Secretary of the United States Department of Agriculture had undertaken the collection of statistics of mortality and morbidity in the United States for the purpose of making comparisons with meteorological data, and thus establishing valuable climatological laws. This work was conducted by the Weather Bureau, and the results were published in monthly issues of "*Climate and Health*." It is a matter of deep regret that this service, so promisingly begun, was found necessary to be discontinued, as explained by the following extract from a circular issued by Prof. Willis L. Moore, Chief of the Weather Bureau, under date of June 22, 1896:

"The discontinuance of the publication, *Climate and Health*, is announced to take effect with the end of the present fiscal year, June 30, 1896. It has been deemed necessary to take this action in view of a doubt having arisen as to whether the publication of *Climate and Health* was authorized by the act making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1897.

"With the discontinuance of *Climate and Health* will also terminate the weekly collections of the statistics of mortality and morbidity that have heretofore been published therein, and the physicians and health officers who have coöperated with the Weather Bureau in collecting these statistics are requested to return, by mail, under the Departmental frank, all blank forms and franked envelopes on hand upon the receipt of this announcement."

Table 106.—Average temperature by year and months in 1894, compared with annual and monthly averages for 1893, 1892, and for the 16 years, 1877–92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Years, etc.	Average temperature,—degrees Fahrenheit.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 16 years, 1877–92..	46.14	21.37	23.85	29.38	44.32	55.82	65.81	70.56	67.93	61.18	49.37	36.19	27.87
1892 (12 stations).....	45.38	18.72	26.26	28.44	42.50	53.73	66.79	70.87	69.91	61.08	48.87	33.61	24.16
1893 (9 stations).....	45.64	15.23	20.09	30.61	43.19	54.30	69.05	72.16	68.57	60.40	50.59	36.61	26.88
1894 (11 stations).....	45.49	27.19	22.37	38.70	46.90	55.24	70.37	73.30	68.74	64.45	50.14	33.09	31.40

Table 107.—Average daily range of temperature by year and months in 1894, compared with annual and monthly averages for 1893, 1892, and for the 14 years, 1879-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Years, etc.	Average daily range of temperature,—degrees Fahrenheit.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 14 years, 1879-92..	18.01	15.90	17.27	17.47	19.40	20.35	20.30	20.89	20.08	20.01	17.18	14.11	13.19
1892 (19 stations).....	17.15	16.62	14.06	17.16	19.12	17.22	18.52	22.02	19.98	20.14	18.14	11.60	11.27
1893 (15 stations).....	17.92	15.05	18.20	16.64	16.32	19.20	20.52	20.75	22.12	20.36	17.27	14.28	14.31
1894 (16 stations).....	17.84	14.45	16.90	16.65	17.86	18.20	22.70	23.15	23.16	20.53	15.76	12.59	12.06

Table 108.—Comparison of the extremes and of the range of temperature, by year and months, in 1894, with annual and monthly averages for the preceding 7 years, 1887-93, and for the 16-year period, 1877-92. Observations made with registering thermometers by observers for the State Board of Health and for the U. S. Signal Service. These comparisons, etc., are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Year and months.	Extremes and range of temperature,—degrees Fahrenheit.*																	
	1887.			1888.			1889.			1890.			1891.			1892.		
	Highest.	Lowest.	Range.	Highest.	Lowest.	Range.	Highest.	Lowest.	Range.	Highest.	Lowest.	Range.	Highest.	Lowest.	Range.	Highest.	Lowest.	Range.
Year	104	-28	132	99	-38	132	97	-23	120	100	-26	126	100	-14	114	102	-24	126
January	54	-28	82	45	-23	68	53	-7	60	66	-14	80	52	-10	62	57	-22	79
February	55	-21	76	49	-33	82	49	-23	72	63	-8	71	55	-14	69	52	-24	76
March	60	-14	74	69	-20	89	65	5	60	59	-28	85	58	-8	66	64	-13	77
April	82	8	74	88	6	82	80	14	66	80	1	79	87	10	77	79	13	66
May	97	28	69	84	21	63	95	23	72	91	21	70	85	25	60	85	27	58
June	98	40	58	99	29	70	93	36	57	98	32	66	97	31	66	102	34	68
July	104	39	65	97	40	57	97	36	61	98	39	59	95	37	58	97	41	56
August	94	37	61	94	33	61	94	37	57	100	34	66	100	37	63	95	37	58
September	91	26	65	90	28	62	93	25	68	90	27	63	93	35	58	92	30	62
October	80	11	69	73	23	50	76	14	62	80	24	56	87	21	66	82	23	59
November	70	-6	76	72	8	64	66	11	55	68	0	68	65	-3	68	64	5	59
December	56	-6	62	55	1	54	65	2	63	50	-6	56	60	8	52	58	-11	69
Av. month.....	79	10	69	76	9	67	77	14	63	79	10	68	78	14	64	77	12	66

* For the 18 years, 1877-94, the highest temperature was 105°, at Battle Creek, September 9, 1884; the lowest was -36°, at Manistique, January 27, 1885.

Table 109.—Average absolute humidity, by year and months, in 1894, compared with annual and monthly averages for 1893, 1892, and for the 16 years, 1877-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Years, etc.	Absolute humidity,—grains of vapor in a cubic foot of air.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 16 years, 1877-92..	3.44	1.45	1.56	1.79	2.77	3.91	5.46	6.04	5.74	4.88	3.52	2.32	1.80
1892 (10 stations).....	3.49	1.35	1.80	1.79	2.61	3.97	6.08	6.23	5.92	4.88	3.34	2.23	1.64
1893 (7 stations).....	3.51	1.19	1.42	2.08	2.77	3.88	6.12	6.50	5.58	4.78	3.72	2.37	1.83
1894 (7 stations).....	3.61	1.77	1.40	2.52	3.12	4.16	6.07	5.90	5.43	5.32	3.59	2.04	1.96

Table 110.—Average relative humidity, by year and months, in 1894, compared with annual and monthly averages for 1893, 1892, and for the 15 years, 1878-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Years, etc.	Relative humidity,—per cent of saturation.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 15 years, 1878-92..	76	83	83	78	70	* 69	73	72	73	76	76	80	83
1892 (10 stations).....	80	88	90	88	71	77	80	72	74	77	75	88	89
1893 (7 stations).....	79	89	88	84	73	72	74	72	70	75	79	82	88
1894 (7 stations).....	75	82	81	77	73	76	70	63	68	74	78	80	81

Table 111.—Average per cent of cloudiness, by year and months, in 1894, compared with annual and monthly averages for 1893, 1892, and for the 16 years, 1877-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Years, etc.	Per cent of cloudiness.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 16 years, 1877-92..	56	70	65	58	51	50	49	40	43	44	58	69	74
1892 (11 stations).....	57	61	77	48	48	68	60	33	38	38	48	85	79
1893 (8 stations).....	54	76	65	56	68	50	34	38	30	43	47	65	80
1894 (9 stations).....	54	68	57	55	54	60	41	29	43	41	64	73	63

Table 112.—*Inches of rain and melted snow, by year and months, in 1894, compared with annual and monthly averages for 1893, 1892, and for the 16 years, 1877-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)*

Years, etc.	Inches of rain and melted snow.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 16 years, 1877-92...	35.40	2.23	2.53	2.26	2.47	3.50	3.93	3.13	3.25	3.15	3.17	3.17	2.60
1892 (18 stations).....	33.08	1.95	2.16	1.39	2.16	5.45	5.17	2.39	2.92	3.01	1.40	3.14	1.95
1893 (16 stations).....	36.34	2.34	2.78	2.40	4.77	2.91	3.55	2.88	1.22	2.52	4.24	3.05	3.74
1894 (16 stations).....	28.74	1.77	1.66	2.09	2.46	6.52	2.76	1.30	.72	3.18	2.76	2.02	1.55

Table 113.—*Average amount of atmospheric ozone (day), by year and months, in 1894, compared with annual and monthly averages for 1893, 1892, and for the 16 years, 1877-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)*

Years, etc.	Ozone by day,—degree of coloration of test-paper.*												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 16 years, 1877-92..	3.38	3.57	3.65	3.70	3.52	3.60	3.41	2.99	3.24	3.13	3.13	3.13	3.43
1892 (7 stations).....	3.95	4.29	4.32	4.18	3.58	4.24	4.39	3.60	4.52	3.56	3.69	3.23	3.83
1893 (5 stations).....	3.91	4.02	4.54	4.30	3.92	4.18	3.98	3.50	4.56	3.34	3.70	3.08	3.81
1894 (9 stations).....	3.95	4.33	4.68	4.60	4.28	4.60	3.82	3.33	4.21	3.37	3.46	3.41	3.51

* In this Table allowance has been made for difference in sensitiveness of different lots of test-paper Scale=10 degrees.

Table 114.—*Average amount of atmospheric ozone (night), by year and months, in 1894, compared with annual and monthly averages for 1893, 1892, and for the 16 years, 1877-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)*

Years, etc.	Ozone by night,—degree of coloration of test-paper.*												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 16 years, 1877-92..	3.52	3.93	4.21	4.16	3.87	3.76	3.51	2.89	2.97	2.69	3.22	3.33	3.77
1892 (7 stations).....	4.18	4.37	5.05	4.48	4.33	4.58	4.62	3.44	4.56	3.26	3.73	3.49	4.20
1893 (5 stations).....	4.20	4.08	4.92	4.92	4.62	4.55	4.15	3.66	4.56	3.24	3.91	3.28	4.53
1894 (9 stations).....	4.31	4.21	4.86	4.62	4.62	5.03	4.64	4.07	4.16	3.67	3.70	3.87	4.23

* In this Table allowance has been made for difference in sensitiveness of different lots of test-paper. Scale=10 degrees.

Table 115.—Average velocity of the wind in miles per hour, by year and months, in 1894, compared with annual and monthly averages for 1893, 1892, and for the 11 years, 1882-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Years, etc.	Average velocity of wind.—miles per hour.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 11 years, 1882-92..	9.5	10.8	10.6	10.3	10.3	9.4	7.8	7.8	7.6	8.6	9.4	10.7	11.0
1892 (9 stations).....	9.2	10.8	8.8	9.2	11.8	9.7	7.5	6.9	7.3	8.4	9.4	10.4	9.8
1893 (8 stations).....	10.2	9.7	11.7	11.7	13.2	9.8	8.2	8.2	7.6	9.2	10.6	11.3	11.7
1894 (8 stations).....	10.1	10.8	11.7	12.4	9.8	10.5	7.8	8.2	7.3	9.1	9.7	12.0	11.4

Table 116.—Average atmospheric pressure, by year and months, in 1894, compared with annual and monthly averages, for 1893, 1892, and for the 16 years, 1877-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Years, etc.	Average atmospheric pressure,—inches of mercury.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 16 years, 1877-92..	29.147	29.175	29.173	29.143	29.131	29.106	29.091	29.120	29.144	29.138	29.171	29.153	29.161
1892 (12 stations)	29.096	29.068	29.143	29.117	29.118	28.995	29.017	29.156	29.104	29.132	29.096	29.090	29.101
1893 (8 stations)	29.080	28.977	29.124	29.067	29.000	28.982	29.066	29.077	29.111	29.086	29.079	29.059	29.093
1894 (10 stations)	29.053	29.076	29.067	29.042	29.064	28.995	29.035	29.063	29.062	29.069	28.961	29.080	29.082

Table 117.—Average daily range of atmospheric pressure, by year and months, in 1894, compared with annual and monthly averages for 1893, 1892, and for the 11 years, 1882-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Years, etc.	Average daily range of barometer,—inches of mercury.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 11 years, 1882-92..	.211	.310	.306	.258	.217	.165	.137	.124	.132	.163	.206	.253	.268
1892 (12 stations).....	.199	.236	.256	.236	.239	.213	.129	.135	.121	.142	.198	.241	.246
1893 (8 stations).....	.227	.253	.366	.290	.288	.175	.138	.151	.123	.167	.225	.213	.329
1894 (10 stations).....	.203	.293	.290	.221	.217	.172	.124	.109	.114	.155	.230	.267	.244

Table 118.—Average monthly range of atmospheric pressure, by year and months, in 1894, compared with annual and monthly averages for 1893, 1892, and for the 11 years, 1882-92. These averages are for groups of several stations in Michigan. (Data supplied by State Board of Health.)

Years, etc.	Range of barometer,—inches of mercury.												
	Annual av.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Av. 11 years, 1882-92..	.979	1.307	1.322	1.181	1.069	.796	.735	.610	.630	.830	1.017	1.125	1.154
1892 (12 stations) .....	.961	1.084	1.236	1.164	1.009	1.064	.641	.783	.477	.798	.996	1.220	1.065
1893 (8 stations) .....	.969	1.110	1.482	1.066	1.138	.955	.591	.487	.489	.616	1.256	1.135	1.313
1894 (9 stations) .....	.840	1.050	1.447	.799	.866	.873	.644	.411	.465	.680	.752	1.150	.947

PART V.—REGISTRATION OF VITAL STATISTICS IN THE CITIES OF MICHIGAN, 1894.

This part of the report is a continuation of the subject introduced in the Report for the year 1892, and which, in interest and practical importance, is second to no other portion of the Report, viz., the knowledge of the vital history of our Michigan cities. It is very often the case that important decisions regarding the efficiency of city boards of health, or comparisons between the work accomplished by successive public health administrations, hinge upon the intelligent interpretation of vital statistics. Mortality statistics, like every other species of figures, may be made the vehicles of misrepresentation in regard to actual sanitary changes and results. It is important, therefore, that there be at hand an impartial and purely statistical report on the vital statistics of each city, to which reference may be made for the exact facts in the event of their becoming the subjects of public interest.

Besides its practical importance in settling disputed questions of public health, the subject of urban statistics is of great interest, as the vital changes of the people are seen at their most intense movement in the cities. The age distribution of the population tends to vary from that of the country, owing to the large migration of young people from country to town, and this change is proceeding with great rapidity in the United States as a whole and in this State. The spread of certain classes of diseases is facilitated by the density of city population, and other diseases result from the malnutrition and unhygienic conditions usually associated with city life. Moreover, much light is thrown upon the vital statistics of the State by the vital statistics obtained for certain of its cities by their local registration systems. It has been fully pointed out that the results of the State enumeration of births and deaths are very imperfect, owing to imperfections in the manner of collecting the data, and in many respects the conclusions derived from a study of the results of local registration are more nearly correct than those obtained from the State Registration Reports, or printed in the decennial census volumes. As an illustration of this fact, see the foot-notes relative to deaths registered in Grand Rapids and Detroit during the year 1894, on pages 49 and 65 preceding.

In the Registration Report for 1892 the status of the registration of vital statistics, by which is included almost solely the registration of deaths, in the cities of Michigan was presented as fully as the materials that could be obtained permitted, and reference may accordingly be made to the pages of that report for any details in regard to the methods of collection of data and the legal authority for the same. In the present Report, as in the preceding one, the statistics of

births and deaths are given as returned from the cities of the State under the general registration law. Comparison may be made with the deaths enumerated by the State census of 1894 for the census year ended June 1, 1894, which data are given in Table 17 (beginning on page 34). The deaths enumerated by both census and Registration have no connection with the deaths registered under local ordinances, and, in general, are very imperfectly collected and returned. For the purpose of comparison, the results of local registration are given for the cities of Detroit, Grand Rapids and Kalamazoo, these being all the cities of the State for which data were available.

A statement of the contents of the tables in this part of the report is here given:

Synopsis of tables relating to the registration of vital statistics in the cities of Michigan.

Tables.	Vital statistics of Michigan cities, 1894.
119.	List of the cities of Michigan, in alphabetical order, showing the population of each city, the number of births and deaths returned from each under the State registration (enumeration), and the birth-rates and death-rates for the year 1894.
120.	Comparison of the city and country birth-rates and death-rates in Michigan, according to the returns, for the years 1890-94.
121.	Deaths and death-rates for certain cities of Michigan under local systems of registration, 1890-94.
122.	Comparison of the death-rates from certain important diseases as enumerated by supervisors for the State of Michigan and as registered by the city boards of health for the cities of Detroit and Grand Rapids for the years 1890-94.

BIRTHS AND DEATHS IN THE CITIES OF MICHIGAN AS RETURNED UNDER THE STATE SYSTEM OF REGISTRATION, 1894.

Table 119 presents the results of the State system of enumeration of births and deaths for each city of the State during the year 1894. The population of each city is also given according to the State census of 1894, and the birth-rates and death-rates have been calculated.

The average birth-rates and death-rates of city populations are considerably higher than those of the country according to the returns; comparisons are given in Table 120, which shows the rates for the State, as a whole, for Detroit, for the cities of the State exclusive of Detroit, and for the country exclusive of all cities, for each of the years 1890-94. The figures in this table are vitiated by fraudulent returns from Detroit for the years 1890 and 1891, and also by what appears to be an imperfect registration of births for the year 1894. The birth-rate of Detroit fell from 32.8 per 1,000 in 1893 to 24.7 per 1,000 in 1894, corresponding to returns of births amounting to 7,545 and 5,863 for these years. Now undoubtedly the number of births declined from 1893 to 1894 in Detroit, but not to the extent indicated. In proof of this may be adduced the fact that the births for the year 1895, just received at this Department but not yet compiled, will number about 6,500. Returns of this character for a large city show great regularity from year to year when accurately collected, and the excessive fluctuations shown in the registration returns from Detroit may be due for the most part to irregularities in the very unsatisfactory system of enumeration.

Table 119.—Births and deaths enumerated in the cities of Michigan by the State system of registration during the year 1894, with population by State census of 1894 and rates per 1,000 population. (Still-births included.)

Cities.	Population, June 1, 1894.	Births enumerated, 1894.	Deaths enumerated, 1894.	Birth-rate per 1,000 population, 1894.	Death-rate per 1,000 population, 1894.	Cities.	Population, June 1, 1894.	Births enumerated, 1894.	Deaths enumerated, 1894.	Birth-rate per 1,000 population, 1894.	Death-rate per 1,000 population, 1894.
All cities.....	821,051	18,580	9,328	22.6	11.4	Iron Mountain.....	7,639	407	83	53.3	10.9
Adrian.....	9,511	160	115	16.8	12.1	Ironwood.....	9,324	374	123	40.1	13.2
Albion.....	4,844	61	57	12.6	11.8	Ishpeming.....	11,687	336	73	28.7	6.2
Alpena.....	12,139	365	120	30.1	9.9	Jackson.....	22,615	386	227	17.1	10.0
Ann Arbor.....	11,069	240	146	21.7	13.2	Kalamazoo.....	21,054	435	279	20.7	13.3
Au Sable.....	2,661	66	29	24.8	10.8	Lansing.....	15,847	217	236	13.7	14.9
Battle Creek.....	15,522	280	117	14.8	7.5	Lapeer.....	2,952	11	15	3.7	5.1
Bay City.....	30,042	726	260	24.2	8.7	Ludington.....	8,244	235	85	28.5	10.3
Belding.....	3,006	43	13	14.3	4.3	Manistee.....	13,450	457	123	34.0	9.1
Bessemer.....	2,528	109	21	43.1	8.3	Marine City.....	3,483	93	30	26.7	8.6
Big Rapids.....	5,202	81	62	15.6	11.9	Marquette.....	9,726	222	131	22.8	13.5
Benton Harbor.....	5,315	83	32	15.6	6.0	Marshall.....	4,599	51	31	11.1	6.7
Cadillac.....	5,106	124	37	24.3	7.2	Mason.....	1,761	23	27	13.1	15.3
Charlotte.....	4,850	32	35	7.4	8.0	Menominee.....	12,532	554	242	44.2	19.3
Cheboygan.....	6,957	149	67	21.4	9.6	Midland.....	2,484	52	36	20.9	14.5
Clare.....	1,392	23	6	16.5	4.3	Monroe.....	5,613	86	51	15.3	9.1
Coldwater.....	5,286	70	84	13.2	15.9	Mt. Clemens.....	5,649	95	33	16.8	5.8
Corunna.....	1,551	14	15	9.0	9.7	Mt. Pleasant.....	3,178	65	37	20.5	11.6
Detroit.....	237,798	5,863	2,958	24.7	12.4	Muskegon.....	20,224	461	214	22.8	10.6
Dowagiac.....	3,553	37	24	10.4	6.8	Negaunee.....	5,940	182	52	30.6	8.8
Eaton Rapids.....	2,157	29	42	13.4	19.5	Niles.....	4,503	53	69	11.8	15.3
Escanaba.....	8,124	169	59	23.3	7.3	No. Muskegon.....	911	15	4	16.5	4.4
Flint.....	10,420	143	132	13.7	12.7	Norway.....	3,587	129	51	36.0	14.2
Gladstone.....	2,131	66	9	31.0	4.2	Owosso.....	8,272	143	87	17.3	10.5
Gladwin.....	882	1	0	1.1	---	Pontiac.....	7,277	77	119	10.6	16.4
Grand Haven.....	5,270	79	67	15.0	12.7	Port Huron.....	18,140	386	208	18.5	11.2
Grand Ledge.....	2,218	37	44	16.7	19.8	Saginaw.....	44,643	1,040	624	23.3	14.0
Grand Rapids.....	79,438	1,869	854	23.4	10.8	Sault Ste. Marie.....	7,244	193	53	26.6	7.3
Greenville.....	3,113	28	35	9.0	11.2	St. Clair.....	2,575	52	34	20.2	13.2
Harrison.....	746	15	7	20.1	9.4	St. Ignace.....	2,068	61	20	29.5	9.7
Hastings.....	3,014	33	31	10.9	10.3	St. Joseph.....	4,519	62	49	13.7	10.8
Hillsdale.....	4,121	18	47	4.4	11.4	St. Louis.....	2,204	24	5	10.9	2.3
Holland.....	6,307	161	78	25.5	12.4	Stanton.....	1,303	14	12	10.7	9.2
Hudson.....	2,346	35	37	14.9	15.8	West Bay City.....	12,340	301	101	24.4	8.2
Ionia.....	5,024	66	52	13.1	10.4	Wyandotte.....	4,209	61	41	14.5	9.7
						Ypsilanti.....	6,126	42	36	6.9	5.9

Table 120.—Comparisons of the city and country birth-rates and death-rates in Michigan, as enumerated under the State system of registration, 1890-94. (Still-births included.)

City and country.	Births per 1,000 population.					Deaths per 1,000 population.				
	1894.	1893.	1892.	1891.	1890.	1894.	1893.	1892.	1891.	1890.
State.....	19.9	21.6	21.3	23.8	25.0	9.3	10.0	10.0	10.4	10.3
Detroit*.....	24.7	32.8	35.2	57.5	78.8	12.4	14.4	14.2	19.1	23.8
Cities exclusive of Detroit.....	21.8	24.1	24.3	21.4	23.3	10.9	11.8	12.7	11.9	11.1
Country.....	18.8	18.8	18.0	19.6	17.6	8.2	8.5	8.3	8.4	8.1

* The birth-rates and death-rates for Detroit for the years 1890 and 1891 are entirely unreliable owing to fraudulent returns; see Report for 1892, p. 8, for explanation. It is to be noted that the fraudulent additions to the returns of deaths are not sufficient to increase the rates sufficiently to equal the actual registered death-rates for those years, as given in Table 121. The enumeration of births was probably unusually imperfect in Detroit for the year 1894.

Both the birth-rates and death-rates of the urban population are seen to be higher than those of the rural population of the State, but it is probable that the difference is slightly exaggerated in the above comparison owing to the fact that registration is somewhat more accurate on the whole in the cities. In some cities it is evident that the results of immediate local registration have been used in making the returns, and in such cases many deaths are included that would have been overlooked if the periodical enumeration had been depended upon alone. *The fact that one city shows a higher degree of mortality than another in Table 119 must not be taken as conclusive evidence that more unsanitary conditions exist until the relative accuracy of the enumeration of deaths is determined.* These statistics ought, it is true, to be a reliable guide in ascertaining the comparative healthfulness of different portions of the State and of its various cities, but the percentage of omissions is so large and so irregularly distributed under the present imperfect law that very few definite statements of value can be made in regard thereto.

LOCAL MUNICIPAL REGISTRATION OF DEATHS IN MICHIGAN, 1894.

While compulsory registration of deaths is the rule in many of the cities of the State under local ordinances, the laws for this purpose are so loosely administered in practice as to yield few results of value. Moreover, in most cases there is no provision for compilation or even for making a general statement of the results of each year, in consequence of which it is difficult to obtain information concerning the current year and quite impossible to learn anything concerning the number of deaths registered and the causes of death in previous years. The principal facts obtainable are those contained in the monthly reports of the Detroit and Grand Rapids boards of health and the manuscript report of the health officer of Kalamazoo to the State Board of Health and to the State Department.

The total number of deaths registered in the cities of Detroit and Grand Rapids for each of the years 1890-94, and in Kalamazoo for 1890 and 1893-94, may be seen in Table 121. The death-rates calculated to estimated population for intercensal years, are also given. It should be remembered that the deaths stated include still-births, in order that comparison may be directly made with the results of the State system under which they have always been compiled with deaths, and that consequently the death-rates given may be slightly greater than those stated by the city authorities for the same years in their reports.

Table 121.—Deaths and death-rates registered in certain cities of Michigan, 1890-94. (Still-births included.)

Cities.	Deaths registered.					Death-rates per 1,000.				
	1894.	1893.	1892.	1891.	1890.	1894.	1893.	1892.	1891.	1890.
Detroit.....	4,388	4,976	5,417	4,681	4,308	18.4	21.6	24.4	21.9	20.9
Grand Rapids.....	1,162	1,298	1,352	1,255	1,091	14.6	17.4	19.4	20.2	18.1
Kalamazoo.....	265	290	-----	-----	314	12.6	14.3	-----	-----	17.6

Table 122 is of very great importance because it enables the probable amount of correction to be applied to the rates calculated for different causes of death in Part IV of this Report. Thus the death-rate from consumption according to the returns for the State of Michigan, was only 98.4 per 100,000 population during the year 1894—a phenomenally low rate as compared with the rates of any registration state or city. But Detroit had a rate of 169.4 and Grand Rapids a rate of 168.7 for the same year, as registered by their boards of health from certificates of death. The great difference is due undoubtedly, for the most part, to the greater inaccuracy of the State system of registration, as compared with those systems in operation in the cities. It is true that the cities may be expected to show a somewhat greater mortality than the country, but comparison of urban and rural rates in registration states proved that no such disproportional relation as that shown for Detroit and Michigan exists.

Besides the municipal registration of mortality in the larger cities of the State, it is gratifying to learn that considerable attention had been directed to the subject in some of the smaller towns. Port Huron has recently established a good system of local registration at the suggestion of her able health officer, Dr. H. R. Mills. The local press has almost uniformly shown an interest in the subject and a strong desire for the improvement of the method of registration whenever attention has been called to the defects of the present systems. Thus the *Coldwater Courier*, in an editorial on "Vital Statistics," under date of March 14, 1896, makes the following excellent suggestions:

"The city clerk, under direction of the city council, has compiled a very complete record of the interments made in Oak Grove Cemetery, giving the name, age, sex, residence, cause of death of the deceased so far as known, and location of grave. This is most commendable so far as it goes, but the record is not yet complete enough to answer the demands of the State law, nor is it sufficient to base the percentage of the death-rate that occurs in the city of Coldwater. The cemetery ordinance is not complete enough for all purposes, and its one almost fatal defect is, that no report is made of deaths that occur in the city where the interment is made in other cemeteries than Oak Grove. The attention of the city council is most respectfully called to this matter, and *The Courier* earnestly urges upon the council the importance of the registration of all deaths that occur in the city. Every death should be certified to by the physician in attendance and a report made to the health officer, who in turn makes a report to the State Board of Health.* No such return can be made unless such registration exists, and no death-rate can be correctly estimated unless such report is made. Such requirement is the absolutely essential requisite of an accurate system of mortality statistics. The report collected in April by supervisors, of deaths in the city, is not made to the city clerk till June, and does not reach the State Board of Health* until September. One most important item is needed, and that is the number of deaths of children, under certain ages, for the purpose of determining if death cannot be averted by sanitary means, and means for the prevention of disease. *The Courier* has persistently urged the council to take measures for such registration, and in the interest of the health of the city and the lives of its people it urges once more the importance of registration of all deaths that occur in the city, to be reported by the physician in attendance to the health office of the city."

The *Range-Tribune*, of Iron Mountain, had the following in its issue of December 7, 1894:

"Iron Mountain is in an alarming health condition according to the vital statistics on file in the city clerk's office. According to the returns there has been only one death in the city in six months, and the fact of this death would never have been established officially had it not been necessary to secure proofs in order to establish property rights in another country. Of course there have been many other deaths, but the attending physicians have simply neglected to report them, as required by law. And the ordinance requiring a report of births also seems to be a dead letter. It is highly important that the provisions of the ordinances named should be lived up to—enforced by the strong arm of the law, if necessary—and the single death reported clearly establishes the importance of the statistics. At the meeting of the aldermen last Monday evening the city clerk was again instructed to notify physicians of the requirements of the ordinances, and request that they immediately make their returns. These ordinances are among the best we have, and we are glad to see the aldermen evince a disposition to rigidly enforce them."

* Not the State Board of Health, but the State Department, which compiles the vital statistics of Michigan, is here intended.

Table 122.—Comparison of the death-rates per 100,000 population from certain important diseases as enumerated by supervisors for the State of Michigan, and as immediately registered by city boards of health for Detroit and Grand Rapids, 1890-94.

Causes of death.	As enumerated by supervisors for the State of Michigan.								As registered by city boards of health.							
									Detroit.				Grand Rapids.			
	1894.	1893.	1892.	1891.	1890.	1894.	1893.	1892.	1891.	1890.	1894.	1893.	1892.	1891.	1890.	1890.
Consumption.....	98.4	97.7	95.9	96.7	105.4	169.4	180.1	171.7	170.2	161.3	168.7	162.1	184.7	170.6	199.1	199.1
Diphtheria and croup.....	36.7	55.3	60.5	63.3	83.0	101.3	100.9	204.6	169.3	243.8	22.7	65.7	74.4	144.5	194.1	194.1
Scarlet fever.....	7.3	16.3	20.4	18.8	10.6	4.6	33.9	92.9	32.7	18.9	10.1	13.4	10.0	33.8	11.6	11.6
Typhoid fever*.....	25.0	32.8	30.2	33.2	24.0	28.2	43.1	87.4	29.5	13.6	51.6	93.8	74.4	60.2	59.7	59.7
Measles.....	3.8	5.8	3.3	10.6	10.9	4.2	14.8	2.7	14.5	19.4	2.5	6.7	4.3	1.5	5.0	5.0
Whooping-cough.....	7.0	7.8	6.8	7.4	3.6	10.9	20.9	7.2	7.5	3.4	3.8	13.4	7.2	9.2	3.3	3.3
Bowel diseases.....	91.9	92.3	75.2	89.2	88.1	247.6	291.5	311.9	303.9	235.1	170.0	179.5	220.5	241.3	240.6	240.6
Brain diseases.....	81.6	77.5	70.8	75.7	73.7	157.3	187.1	165.0	140.3	150.1	125.9	159.4	153.2	190.6	147.6	147.6
Cancer and tumor.....	36.8	36.3	32.2	32.4	31.3	45.4	53.5	51.8	46.8	52.5	51.6	46.9	68.7	60.2	48.1	48.1
Childbirth.....	9.5	10.1	11.3	12.0	9.3	7.6	9.1	14.4	12.6	7.8	5.0	6.7	5.7	6.1	3.3	3.3
Convulsions.....	18.4	23.6	25.3	25.7	16.7	87.0	112.2	140.2	139.8	121.9	54.1	50.9	47.2	53.4	36.5	36.5
Heart diseases†.....	62.1	64.8	61.3	63.2	56.6	66.0	83.1	87.9	101.0	84.0	70.5	79.0	83.0	115.3	109.5	109.5
Influenza.....	17.9	25.2	41.8	50.5	51.8	8.4	10.4	25.2	11.7	6.8	5.0	5.4	60.1	35.3	16.6	16.6
Kidney diseases.....	24.5	21.7	20.4	19.1	15.8	47.1	44.4	44.2	40.2	36.0	47.8	37.5	31.5	26.1	23.2	23.2
Lung diseases‡.....	75.4	84.6	81.4	79.9	85.3	213.2	313.3	284.4	266.1	275.4	164.9	238.5	279.1	245.9	169.2	169.2
Pneumonia§.....	57.1	66.3	63.9	63.2	53.5	162.7	225.4	183.5	173.0	190.4	144.8	207.7	246.2	213.6	134.4	134.4

* Including a few deaths from "typhus" and "typho-malarial" fever.

† Including "heart failure" in rates for Michigan; this term does not appear in the city reports.

‡ Including pneumonia, but not including consumption.

§ Including "congestion of lungs."

Under the heading, "A Flaw in the Law," the *State Republican*, of Lansing, called attention to a serious defect in the registration of deaths even in those cities that apparently have a satisfactory system of registration of deaths in operation:

"City Clerk Hinman called the attention of a Republican representative this morning to what he considers a defect in the city ordinance regulating the compilation of vital statistics. As the law stands any person who says he has knowledge of the facts may make out a death certificate and certify to the cause of the death. The city clerk says that in every other city in the country having a similar ordinance the duty of making out the certificate falls upon the attending physician.

"These certificates are filed with the city clerk, and the consequence of our method is that the records are unreliable and useless as statistics. The certificates are made out by the undertaker or some member of the family. Often the person making out the certificate is ignorant of the real nature of the disease, and substitutes vague and unscientific words for the exact terms which should be used. The city ordinance provides that no burial permit shall be issued by the clerk until the certificate is filed, and Clerk Hinman expressed a very emphatic opinion this morning that if the city is going to take charge of the burial of the dead in the interests of public health and safety, it ought to amend its ordinance so as to make the information contained in the death certificates good for something."

This objection to the wording of the Lansing ordinance is well taken. A copy of the certificate of death used in Lansing was printed on page 313 of the Registration Report for the year 1892, and attention was called on that page to the same fault to which Mr. Hinman objected. What seems most desirable at the present time is that deaths should be registered on a uniform plan in all of the cities of Michigan, and that the results of registration be returned to the State registration office for compilation, instead of being made of no use whatever in most cases as at present. It may be well to repeat, it being frequently misunderstood even by those who have given some attention to the subject, that the results of registration of deaths in cities based upon burial permits are not returned to the State Department. The supervisors or assessors make an entirely independent enumeration, not generally making any reference to the deaths on record in the city clerk's or health officer's office. Their enumeration is generally very imperfect, as clearly shown by comparison of the deaths returned for the cities of Detroit, Grand Rapids and Kalamazoo in Tables 119 and 121. This foolish way of making a double enumeration of deaths (a triple enumeration in 1894, under the State census) in many of the cities of the State, and of making no use whatever in the State Registration Reports of the only set of returns that approximates to accuracy, will doubtless go on until a modern registration law shall be enacted which shall secure uniform returns of deaths, based upon burial permits, from the entire State of Michigan, city and country alike. The city systems will then fall into place under the general law, and their valuable data, now largely wasted, will be compiled and studied in these Reports.

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APPENDIX

COMPILATION OF LAWS

CONCERNING THE

Registration of Births, Deaths, and Marriages;

THE SOLEMNIZATION OF MARRIAGES AND THE
ISSUANCE OF LICENSES THEREFOR;

AND THE

LAWS CONCERNING DIVORCE,

WITH

SUGGESTIONS TO PERSONS AUTHORIZED TO SOLEMNIZE MARRIAGES.

LAWS RELATING TO THE REGISTRATION OF BIRTHS AND DEATHS.

REGISTRATION OF BIRTHS AND DEATHS. (a)

AN ACT to provide for the Registration of Births, Marriages and Deaths.

§ 858, S. L. 1867, Act 194; Am. 1869, Act 125. SECTION 1. *The People of the State of Michigan enact*, That it shall be the duty of the supervisor of each township, and the supervisor or assessor of any city or ward therein, in this State, between the tenth day of April and the first day of June, in the year eighteen hundred and sixty-nine, to ascertain, by actual inquiry or otherwise, of the inhabitants thereof, the births and deaths which have occurred in their respective townships, cities, or wards, from and including April fifth, eighteen hundred and sixty-eight, to and including December thirty-first, eighteen hundred and sixty-eight, together with the facts relative thereto, as are hereinafter provided for, and shall make an accurate return thereof to the clerk of the county in which such township or city is situated, on or before the first said day of June; and for such service shall receive ten cents for each birth and death so returned by them, to be paid by the county in which such returns are made. In the year eighteen hundred and seventy, and in each and every year thereafter, it shall be the duty of the officers above mentioned, between the tenth day of April and the first day of June, to ascertain, by actual inquiry or otherwise, of the inhabitants thereof, the births and deaths which have occurred in their respective townships, cities or wards, during the year ending on the last day of the preceding December, and shall make the return and receive therefor compensation above provided for: *Provided*, That in the city of Detroit, the duties required by this act to be performed by supervisors and assessors shall be performed by persons appointed by the common council for that purpose; and it shall be the duty of the common council, on or before the tenth day of April in each year, to appoint such number of persons in each ward of said city as shall be necessary to perform said duties within the time limited by

Duties of supervisors and assessors.

In 1869 returns to be made from April 5 to Dec. 31, 1868.

Return to county clerk.

In 1870 and thereafter.

Returns to include from January to December last preceding. Statistics, how obtained. Compensation.

Proviso relative to the city of Detroit.

Duty of common council.

(a) The requirements as to registration of marriages are governed by Act 123, Public Acts 1867.

Persons to be appointed by.	this act; and such persons shall possess all the authority conferred upon, and perform all the duties required of supervisors and assessors, by this act, within the territory assigned them, respectively, by the common council, and shall receive such compensation for their services, not exceeding the sum allowed by this act to supervisors and assessors, as shall be fixed by the common council, to be paid by the county of Wayne, and shall be liable to the same penalties for refusal or neglect to perform any of said duties.
Compensation of persons so appointed.	
How paid.	
Penalties.	
Marriages to be recorded.	§ 859. SEC. 2. Every justice of the peace, minister of the gospel, and all other persons authorized by law to solemnize marriages in this State, shall make a record of each marriage so solemnized by him, and every clerk or keeper of the records of the meetings in which any marriage among the Friends or Quakers shall be solemnized, shall make a record of such marriage, together with all the facts relating to the same, as required by the third section of this act; and such justice, minister of the gospel, clerk, or other person, shall, at the time such marriage is solemnized, deliver, on demand, to either of the parties so joined in marriage, as aforesaid, a certificate of such marriage, containing all the facts in relation thereto, required by said third section of this act, and shall, within ninety days thereafter, deliver to the clerk of the county in which such marriage took place, a certified copy of such record, and, at the same time, pay to the clerk twenty-five cents for recording the same.
Marriage of Quakers.	
Certificates to be furnished.	
Fee for recording.	
County clerks; duties of.	§ 860. <i>Am. 1869, Act 125.</i> SEC. 3. It shall be the duty of the county clerks of the several counties in this State, on receiving the returns of such births, marriages and deaths, to record the same at length in separate books, to be provided at the expense of the State by the Secretary of State, for that purpose, with proper indexes thereto. The births, marriages and deaths shall be numbered and recorded in the order in which they are received by the clerk, and the record of marriages shall be indexed, using both the name of the bridegroom and bride. The record of births shall state, in separate columns, the date of the birth, the name of the child (if it have any), the sex and color of the child, the place of birth, the christian and surname of both parents, the residence and nativity of the parents, the occupation of the father, and the date when the record was made: <i>Provided</i> , That in case the child has no christian name, such name shall be obtained and reported to the county clerk in the next annual report of the supervisor or assessor, and such christian name shall be distinctly designated in such report as the christian name belonging to a child previously reported, and shall be properly entered by said county clerk, in the blank left for such christian name in his book of record; and it shall be the duty of the several county clerks, on or before the tenth day of April in each year, to give to the officers required to make the said returns, lists of such children whose christian names have not been previously reported in their respective towns, cities or wards. The record of marriages shall state, in separate col-
Births, marriages and deaths to be numbered and indexed.	
Record of births shall state.	
Proviso.	

umns, the date and place of marriage, the christian and surname of the bridegroom and bride, and the maiden name of the bride, if a widow, the color, age, and place of birth of each, the residence of each at the time of marriage, the occupation of the bridegroom, and the name and official station of the person by or before whom they were married, the names and residences of at least two witnesses present at such marriage, and the date when such record was made. The record of deaths shall state, in separate columns, the date of the death, the christian and surname of the deceased, the sex and color, whether married or single, the age in years, months, and days, the place of death, the disease or apparent cause of death, the nativity of the deceased, and the occupation, if any, and the names, residence of the parents, if known, and the date when such record was made. The clerks of the several counties shall annually, on or before the first day of September make and transmit to the Secretary of State, a certified copy of the records of his office, of all the births, marriages and deaths reported in their respective counties for the year ending December thirty-first, last preceding. And each county clerk shall receive for the record of each birth and death in his office three cents, and three cents for each birth, marriage and death returned by him to the Secretary of State, to be paid by the county, and shall be compensation in full for all services required by this act to be performed by him.

Record of marriage shall state.

Record of deaths shall state.

Return of county clerk.

Compensation.

§ 861. *Am. Id.* SEC. 4. The Secretary of the State shall prepare and furnish to the county clerks of the several counties in this State, blank books of suitable quality and size, with proper rulings and headings, to be used as books of record, in carrying into effect the provisions of this act. He shall also prepare and furnish blank "forms for returns," as hereinbefore specified, accompanied with such instructions and explanations as may be necessary to insure uniformity in such returns, which blanks shall be forwarded to the several county clerks on or before the first day of March in each year; and the said county clerks shall deliver the same to the supervisors or assessors of the several townships, cities, or wards therein, in their respective counties, on or before the tenth day of April.

Secretary of State shall furnish all blank books, blanks, instructions, etc.

§ 862. SEC. 5. It shall be the duty of the Secretary of State to receive the returns made in pursuance of the third section of this act, and he shall cause the same for each year to be bound together, in one or more volumes, at the expense of the State, and make indexes thereto; and with such assistance as may be voluntarily rendered by any authorized committee appointed by the medical faculty of the University of Michigan, or by any regularly authorized medical society in this State, for that purpose, he shall prepare such tabular statements, results, and deductions therefrom as will render them of practical utility, and make report thereof, annually, to the Governor of the State, which report may be ordered published and distributed in such manner as the Legislature may from time to time direct.

Returns to be bound and indexed.

Secretary of State to make annual report.

Neglect to
keep records.

Neglect to de-
liver certifi-
cates.

Penalty.

Certificate of
death.

Refusal to
make certifi-
cate.

Penalty.

Facts to be
obtained by
supervisor.

Refusal to fur-
nish.

Obtained
under oath.

§ 863. SEC. 6. Every justice of the peace, minister of the gospel, and all other persons authorized by the laws of this State to solemnize marriages, and clerks or keepers of records of the meetings in which any marriage among the Friends or Quakers shall be solemnized, who shall neglect or refuse to make a record of such marriage, or to deliver to the county clerk of the county in which the marriage took place, a certified copy of such record, or who shall refuse, on demand, to deliver to the parties to such marriage the certificate thereof, as required by section two of this act, or who shall wilfully make a false or fictitious entry in his record of marriages, or in the certified copy of such record delivered to the county clerk, or in the certificates of marriages delivered to the parties thereto, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by fine not exceeding one hundred dollars, and in default of paying the same, shall be imprisoned in the county jail of the county in which such conviction shall be had, until said fine be paid, but not to exceed the period of ninety days.

§ 864. SEC. 7. Every physician, surgeon or midwife who shall have been in attendance upon any deceased person, shall, upon application of any supervisor or assessor of the township, city, or any ward thereof, in which such death occurred, make out and deliver to such supervisor or assessor a certified statement, without fee, containing the name of the disease, or cause (if known), producing the death of such person; and any medical attendant who shall neglect or refuse to give such statement, or who shall wilfully make a false statement in relation to such death, shall, for such offense, be liable to pay a fine of not less than ten nor more than fifty dollars, and the costs of prosecution, which fine the said supervisor or assessor is hereby required to sue for and collect, in his official character.

§ 865. SEC. 8. It shall be the duty of each supervisor or assessor to obtain the facts in relation to births and deaths within his township, city, or any ward therein (not otherwise obtained), from the heads of families, the keepers, overseers, or superintendents of asylums, hospitals, jails, prisons, work-houses, almshouses, houses of correction, and similar institutions, the keepers of hotels, public and private boarding houses, and the masters or chief officers of steamboats and sail vessels, navigating any of the waters of this state, and touching at any port of entry therein, in which such births or deaths occurred; and if either of the above named persons shall refuse to give such information, then the same shall be obtained by such supervisor or assessor from any person having a knowledge of the facts in relation to such birth or death; and if the supervisor or assessor shall have reason to believe that any person or persons wilfully misrepresented or concealed any facts relative to such birth or death in his township, city, or any ward therein, which he cannot otherwise obtain, he may examine such person or persons on oath (which oath such supervisor or assessor is hereby empowered and authorized to

administer) in relation to any birth or death within his township, city or any ward therein, of which such person or persons may have knowledge or information; and if any person, after being duly subpoenaed (as provided for compelling the attendance of witnesses in justices' courts) by such supervisor or assessor, for the purposes aforesaid, shall neglect or refuse to appear before such officer, or, appearing, shall refuse to be sworn and testify in relation to such matter, he shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished therefor by fine not exceeding fifty dollars, and in default of paying the same shall be imprisoned in the county jail of the county in which such conviction shall be had, until said fine be paid, but not exceeding ninety days; and any person who, after being duly sworn as aforesaid, shall wilfully make any false statement in relation to any birth or death, about which he is required to testify, shall be deemed guilty of wilful and corrupt perjury: *Provided*, That no person shall be required to answer any question which will tend to criminate himself or herself upon any such examination.

Neglecting to answer a subpoena.

Penalty.

Perjury.

Proviso.

§ 866. SEC. 9. In case of the refusal or neglect by any of the officers mentioned in this act, to perform any of the duties hereinbefore required of them or either of them, to be done and performed by any of the provisions herein contained, such officer shall be liable to a fine not to exceed one hundred dollars, and the costs of prosecution; and the prosecuting attorney in each county is hereby required to prosecute, in the name of the people of the State of Michigan, all persons in his county who shall wilfully violate any of the provisions of this act; and the said supervisor or assessors of any township, city or any ward therein, may be prosecuted for a misdemeanor under this section, and upon conviction, punished as therein provided for.

Neglect to perform duties.

Penalty.

Misdemeanor.

§ 867. *Added 1869, Act 125.* SEC. 10. (11). The several supervisors and assessors of the townships, villages, and cities in this State, who have made any returns of births and deaths to the county clerk of their respective counties for the year eighteen hundred and sixty-eight, and have not received the amount of compensation as provided for in this act, shall be paid therefor at rates set forth in the preceding sections. And such county clerks as have made returns of the births, marriages and deaths to the Secretary of State for the year eighteen hundred and sixty-eight, and who have not received compensation therefor, shall be paid for the same at the rates set forth in the preceding sections.

Compensation of supervisors and assessors for 1868.

County clerks.

MARRIAGE AND THE SOLEMNIZATION THEREOF. (a)

Who shall be capable of contracting marriage.

§ 6209. *Rev. Stat. 1846, Chap. 83.* SECTION 1. Every male who shall have attained the full age of eighteen years, and every female who shall have attained the full age of sixteen years, shall be capable in law of contracting marriage, if other wise competent. (*See notes.*)

Marriage is a civil contract.

§ 6210. SEC. 2. Marriage as far as its validity in law is concerned, is a civil contract to which the consent of parties capable in law of contracting is essential. (*See notes.*)

Who shall not intermarry.

§ 6211. SEC. 3. No man shall marry his mother, grandmother, daughter, granddaughter, stepmother, grandfather's wife, son's wife, grandson's wife, wife's mother, wife's grandmother, wife's daughter, wife's granddaughter, nor his sister, brother's daughter, sister's daughter, father's sister, or mother's sister. (*See notes.*)

Idem.

§ 6212. SEC. 4. No woman shall marry her father, grandfather, son, grandson, stepfather, grandmother's husband, daughter's husband, granddaughter's husband, husband's father, husband's grandfather, husband's son, husband's grandson, nor her brother, brother's son, sister's son, father's brother, or mother's brother.

Who not to marry.

§ 6213. SEC. 5. No marriage shall be contracted whilst either of the parties has a former wife or husband living, unless the marriage with such former wife or husband shall have been dissolved. (b) (*See notes.*)

Insane persons, etc. What marriages declared valid.

§ 6214. SEC. 6. No insane person or idiot shall be capable of contracting marriage. All marriages heretofore contracted between white persons and those wholly or in part of African

(a) For prior Statutes relative to the solemnization of Marriages, see Woodward Code, p. 42; Case Code, p. 111; Code of 1820, p. 259; Rev. of 1827, p. 280; Laws of 1832, p. 6; Rev. of 1838, p. 329; R. S. of 1838, p. 333. The requirements as to licenses and solemnization of marriages are governed by Act 123, Public Acts 1887.

(b) Act 187, Laws of 1887, prohibits divorced persons from remarrying for a period specified in the decree, not to exceed two years.

NORA.—The effect of marriage was, at the common law, to produce what is called unity of person; the husband and wife being but one person in the law: *Burdeto v. Amperse*, 14 Mich. 92.

6209. Age of legal consent: *People v. Slack*, 15 Mich. 193; *Bouker v. People*, 37 Mich. 7; *Lewis v. People*, 37 Mich. 518.

Contracting marriage means the actual forming of the marriage relation. Marriages contracted by parties who are of the legal age to consent are valid. But executory contracts to marry, made by parties under the age of twenty years, have not the legal force necessary to sustain an action for breach of promise: *Frost v. Vought* 37 Mich. 65.

§ 6210. Marriage a contract, etc., *Leavitt v. Leavitt*, 13 Mich. 456. Chastity is not requisite to its validity: *Id.*

A contract by which two parties mutually agreed to live as man and wife, but each was to retain the right to buy, sell, or transfer his or her property without question from the other. Held to provide only for a concubinage intercourse, is not a valid contract under which either party can claim any rights: *Clancy v. Clancy*, 66 Mich. 202.

Where one of the parties to an alleged marriage, instead of assenting to the contract, positively dissents from it, there can be no legal or valid marriage, although a ceremony is performed by the officiating minister or magistrate: *Roszel v. Roszel*, 73 Mich. 123.

§ 6211. Marriages are prohibited within the degrees of consanguinity named, whether the parties are legitimate or illegitimate, or of the whole or the half blood: *People v. Jenness*, 5 Mich. 318.

§ 6213. *People v. Dawell*, 25 Mich. 273.

§ 6214. *People v. Brown*, 34 Mich. 340.

Marriages between members of Indian tribe in tribal relations, were unquestionably good by the Indian rules. The court cannot interfere with the validity of such marriages without subjecting them to rules of law which never bound them: *Kobogum v. Jackson Iron Co.*, 76 Mich. 498.

It is a principal of universal law that marriages valid by the law governing both parties when made, must be treated as valid everywhere: *Id.*

descent are hereby declared valid and effectual in law for all purposes, and the issue of such marriages shall be deemed and taken legitimate as to such issue and as to both of the parents. (See notes.)

§ 6215. SEC. 7. Marriages may be solemnized by any justice of the peace in the county in which he was chosen, and they may be solemnized throughout the State by any minister of the gospel who has been ordained according to the usages of his denomination, and who is a pastor of any church or churches in this State, or who shall continue to preach the gospel in this State: *Provided*, That all non-resident ministers of the gospel who are authorized by this act to solemnize marriages, shall keep proper records and make returns as required by section two, chapter sixteen, of the compiled laws of eighteen hundred and seventy-one. (a.) (See notes.)

Marriages by whom solemnized.

Proviso as to non-resident ministers.

§ 6216. SEC. 8 All justices of the peace and ministers of the gospel are hereby authorized and required, before solemnizing any marriage, to examine at least one of the parties on oath, which oath they are hereby authorized to administer, as to the legality of such intended marriage. (See notes.)

One of parties to be examined on oath.

§ 6217. SEC. 9. In the solemnization of marriage, no par-

No particular form required.

(a) Previous to 1871 the Mayor of Flint was also authorized to solemnize marriages.

§ 6215. The validity of marriages solemnized in other states, must, in criminal cases, be shown by the laws of such states: *People v. Lambert*, 5 Mich. 364.

A marriage by a justice outside of his county, followed by cohabitation of the parties as husband and wife for fourteen years, held legal, in a criminal prosecution for adultery: *People v. Girdler*, 65 Mich. 68.

While there may be countries where marriages are void unless solemnized by a person having actually the authority to perform them, such is not the general rule, and such is not our law: *People v. Ferriman*, 72 Mich. 184.

A witness who swears to seeing a man and woman joined together by a marriage ceremony, performed seriously and in earnest, by a person acting in the character of a clergyman or magistrate, testifies to what is a valid marriage unless clearly made illegal by statute: *Id.*

A marriage valid when it is celebrated will be valid everywhere, but if void where celebrated it will be void everywhere: *Hutchins v. Kimmell*, 31 Mich. 131.

§ 6216. Examination of the parties on oath: *Bouker v. People*, 37 Mich. 4, 10.

§ 6217. In this state, whatever the form of ceremony, or even if all ceremony be dispensed with, if the parties agree presently to take each other for husband and wife, and from that time live together professedly in that relation, this will be sufficient to constitute a marriage binding upon the parties, and which will subject them and others to legal penalties for a disregard of its obligations: *Hutchins v. Kimmell*, 31 Mich. 130.

A marriage ceremony is not conclusive of a valid marriage; consent is necessary. When a marriage is not otherwise made out, very clear evidence of conduct in confirmation with that relation is required: *Kopke v. People*, 43 Mich. 45.

Continued cohabitation as husband and wife establishes the relation without any actual marriage ceremony, if the parties are competent to marry and consent to take each other as husband and wife: *Peet v. Peet*, 52 Mich. 404; *Williams v. Kilburn*, 88 Mich. 279.

Reputation is important as evidence to establish the fact of a marriage, but it cannot disprove an actual marriage. And where there is doubt, the presumption should favor a lawful marriage, rather than notorious immorality: *Id.*

In proving marriage, reputation is important only as circumstantial evidence as to whether the parties themselves regarded each other as husband and wife: *Cross v. Cross*, 55 Mich. 230.

As to marriages solemnized in other states and countries, a formal ceremony of marriage, whether in due form or not, must be assumed to be by consent, and therefore *prima facie* a contract of marriage *per verba de presenti*; and when the local law is not shown, the argument in its favor is, that marriage between parties capable of contracting it is of common right, and valid by a common law prevailing throughout Christendom. *Prima facie*, a good marriage is shown when the contract is proved with cohabitation following it, and it cannot be assumed that there are regulations restrictive of the common right until they are shown. When parties take such steps abroad to constitute a marriage as would be sufficient under our laws, afterwards remove to this state and continue to live together here as husband and wife, recognizing the validity and binding obligation of that relation, they will be deemed to be legally married: *Hutchins v. Kimmell*, 31 Mich. 126. See *People v. Calder*, 30 Mich. 88; *Kopke v. People*, 43 Mich. 44-5.

It is quite possible for a valid marriage to be shown with no means to show its time and place, and this is especially true of marriages in distant places: *People v. Ferriman*, 72 Mich. 184.

tiular form shall be required, except that the parties shall solemnly declare, in the presence of the magistrate or minister and the attending witnesses that they take each other as husband and wife; and in every case there shall be at least two witnesses, besides the minister or magistrate, present at the ceremony. (*See notes.*)

SEC. 10. *Repealed S. L. 1869, Act 194, Sec. 10.*

SEC. 11. *Repealed Id.*

SEC. 12. *Repealed Id.*

SEC. 13. *Repealed Id.*

Forfeiture for joining persons in marriage contrary to law.

§ 6218. SEC. 14. If any justice of the peace or minister of the gospel shall join any person in marriage contrary to the provisions of this chapter, he shall forfeit for every such offense a sum not exceeding five hundred dollars.

Punishment of persons unauthorized.

§ 6219. SEC. 15. If any person shall undertake to join others in marriage, knowing that he is not lawfully authorized so to do, or knowing of any legal impediment to the proposed marriage, he shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished by imprisonment in the county jail not more than one year, or by a fine not less than fifty nor more than five hundred dollars, or by both such fine and imprisonment, in the discretion of the court. (*See notes.*)

Marriage not void in certain cases.

§ 6220. SEC. 16. No marriage solemnized before any person professing to be a justice of the peace or a minister of the gospel, shall be deemed or adjudged to be void, nor shall the validity thereof be in any way affected on account of any want of jurisdiction or authority in such supposed justice or minister: *Provided*, That the marriage be consummated with a full belief on the part of the persons so married, or either of them, that they have been lawfully joined in marriage.

Marriages among Quakers.

§ 6221. SEC. 17. The preceding provisions of this chapter, so far as they relate to the manner of solemnizing marriages, shall not affect marriages among the people called Friends or Quakers; nor marriages among people of any other particular denomination having, as such, any peculiar mode of solemnizing marriages; but such marriages may be solemnized in the manner heretofore used and practiced in their respective societies or denominations.

Certificates and record made evidence.

§ 6222. SEC. 18. The original certificates and records of marriage made by the minister or justice, as prescribed in this chapter, and the record thereof made by the county clerk, or a

§ 6219. A misdemeanor, etc., *Bouker v. People*, 37 Mich. 4. Whatever is in the way of a valid marriage is such an impediment as the statute has in view. This statute applies to a marriage where the girl is under the age of consent: *Id.*

§ 6222. The certificates and records of marriages referred to in this section were provided for in sections 10, 11, 12, 13 of this chapter. Those sections were repealed in 1867, and new provisions for such certificates and records were then enacted: See §§ 359, 360.

A duly authenticated certificate of a marriage celebrated in a foreign country may be received in evidence here: *Hutchins v. Kimmell*, 31 Mich. 128.

A paper purporting to be a certificate of a marriage solemnized in another state, and certified by the clerk of the county to be a true and perfect copy of such certificate, as the same appears from the records in his office, but which is not certified as required by the act of Congress, and does not conform to any rule of the state on the subject, is inadmissible as evidence of such alleged marriage in this state: *People v. Perriman*, 72 Mich. 184.

Proof of marriage in civil cases.—See *Shotwell v. Harrison*, 22 Mich. 410. Proof by certificate when solemnized in another state: *People v. Lambert*, 5 Mich. 365.

copy of such record duly certified by such clerk, shall be received in all courts and places as presumptive evidence of the fact of such marriage. (*See notes.*)

In civil cases, evidence of reputation is competent to prove marriage: *Peet v. Peet*, 52 Mich. 464. It is important only as circumstantial evidence as to whether the parties themselves regarded each other as husband and wife: *Cross v. Cross*, 55 Mich. 280.

Except in criminal prosecutions and cases of seduction, marriage may be proved by conduct and reputation, such as, that the parties lived together and raised a family, treated each other on all occasions as husband and wife, jointly signed papers in that relation, addressed each other as such, and were so reputed in the family and by their acquaintances. The law does not make marriage records the best evidence, and even where they exist some parol evidence is usually necessary to identify the parties in case of any controversy: *Proctor v. Bigelow*, 39 Mich. 282. See *Leonard v. Pope*, 37 Mich. 146. Thus, in an action for enticing away the plaintiff's wife, direct proof of a formal marriage is not requisite. But evidence of cohabitation and repute, and of defendant's admissions that the plaintiff and his alleged wife were married, may be allowed to satisfy a jury: *Perry v. Lovejoy*, 49 Mich. 532. The highest evidence of marriage is not required in suits not directly involving the marriage relation as a part of the main issue.

But such evidence of cohabitation and reputation as would be sufficient to prove marriage in civil cases, would not be sufficient where it is sought to fix a charge of adultery on a party; *Hutchins v. Kimmell*, 31 Mich. 130.

Proof of marriage in criminal cases—*Dixon v. People*, 18 Mich. 84. And when solemnized in other states: *People v. Calder*, 30 Mich. 85. And in actions for criminal conversation: *Id.* In prosecutions for adultery, see *People v. Broughton*, 49 Mich. 539.

A marriage by a justice outside of his county, followed by cohabitation of the parties as husband and wife for fourteen years, held legal, in a criminal prosecution for adultery: *People v. Girdler*, 65 Mich. 68.

Testimony of eye witnesses frequently more reliable than documentary evidence: *People v. Ferriman*, 72 Mich. 184.

In criminal cases, proof of marriage solemnized in another state cannot be proved by the certificate thereof: *People v. Lambert*, 5 Mich. 349-355. Nor by certificate when the marriage was in this state: *People v. Bennett*, 59 Mich. 208.

LAWS RELATIVE TO REGISTRATION OF MARRIAGES.

LICENSES AND REGISTRATION OF MARRIAGES.

AN ACT for the requiring of a civil licence in order to marry, and the due registration of the same, and to provide a penalty for the violation of the provisions of the same.

Persons intending marriage must obtain license.

§ 6222a. *P. A. 1887, Act 128; Am. 1889, Act 256.* SECTION 1. *The People of the State of Michigan enact,* It shall be necessary for all parties intending to be married to obtain a marriage license from the county clerk of the county in which either the man or woman resides, and to deliver the said license to the clergyman or magistrate who is to officiate, before the marriage can be performed. If both parties to be married are non-residents of the State it shall be necessary to obtain such license from the county clerk of the county in which the marriage is to be performed.

Where non-residents must obtain license.

Secretary of State to furnish forms, blanks.

§ 6222b. SEC. 2. Blank forms for marriage license and certificate, as also proper books of registration ruled for the items contained in said forms shall be prepared by the Secretary of State, and shall be furnished by him to the county clerk of the various counties of the State in quantities needed. The blank forms for license and certificate shall be made in duplicate and shall provide spaces for the entry of the following items, to wit: The full name, age, color, place of residence, place of birth, occupation, and if known, the father's name, and mother's maiden name, of each of the parties to be married; the number of times either of the parties may have been previously married; the bride's maiden name, in case she is a widow; the date of the giving of the license; the signature of the county clerk; the date and place of the marriage; the names and residences of two witnesses to the marriage, and the certification of the officiating clergyman or magistrate, that the marriage contemplated by the license has been performed by him. And the Secretary of State shall furnish to the county clerks of the various counties of the State, blank forms of affidavit, containing the requisite allegations, under the laws of this State, of the competency of the parties to unite in the bonds of matrimony, and any party applying for license to

Form of license.

Secretary of State to furnish to county clerks blank forms of affidavit.

marry, shall cause such an affidavit to be made and filed with the county clerk, as a basis for the issuing of the license; and such affidavit, together with the license shall be made a matter of record of said clerk's office.

§ 6222c. *Am. 1895, Act 243.* SEC. 3. It shall be the duty of the county clerk, on application being made to him, to fill out the blank spaces of the license according to the sworn answers of the applicant, taken before him or some person duly authorized by law to administer oaths. Whenever it shall appear from said affidavit that the said applicant applies for a license for the marriage of a female who has not attained the age of eighteen years, then it shall be the duty of said county clerk to require that there shall first be produced the written consent of one of the parents of said female or of her legal guardian to the marriage of said female, and to the issuing of the license for which application is made, unless such female have no parent or guardian living. No license shall be issued by said county clerk in such cases until the said requirement is complied with. Such written consent shall be preserved on file in the office of said county clerk. If it shall appear that the parties are legally entitled to be married, the county clerk shall sign the license in certification of the fact that it is properly issued, and he shall make a correct copy thereof in the books of registration. For his services connected therewith he shall be entitled to a fee of fifty cents, to be paid by the party applying, and at the time of the issuing of the license. He shall give the license thus filled out and signed by him, together with the blank form of certificate, to the party applying for delivery to the clergyman or magistrate who is to officiate at the marriage. On the return of the license to the county clerk as hereinafter provided, with the certificate of the clergyman or magistrate that the marriage has been performed, he shall record in the book of registration in their proper places of entry the date and place of the marriage, the names and residences of two witnesses to the marriage and the name of the officiating clergyman or magistrate. All licenses and certificates so issued and returned shall be preserved on file in the office of the county clerk, and he shall as often as once in three months make a faithful report to the Secretary of State of all licenses and certificates issued and received by him.

County clerk to fill out blank spaces to license for marriage.

When to demand written consent of parents.

Written consent to be filed.

Fees for services.

To record licenses in book of registration.

§ 6222d. SEC. 4. It shall be the duty of the clergyman or magistrate, officiating at a marriage, to fill out the spaces of the certificate left blank for the entry of the time and place of the marriage, the names and residences of two witnesses, and his own signature in certification that the marriage has been performed by him. He shall separate the duplicate license and certificate and retain one-half for his own record, and he shall return the other half within ten days to the county clerk issuing the same.

Duty of officiating clergyman or magistrate.

§ 6222e. SEC. 5. Any county clerk who shall refuse to give a license to persons properly applying and legally entitled to be married, or who shall violate any of the provisions of this

Penalty for violating act by county clerk.

Penalty for violation by clergyman.	act, shall be adjudged guilty of a misdemeanor, and shall be punished by a fine of not less than twenty-five dollars nor more than one hundred dollars, or in default of payment thereof by imprisonment in the county jail for a term of thirty days.
Penalty for neglect to return certificate.	§ 6222f. SEC. 6. Any clergyman or magistrate who shall join together in marriage parties who have not delivered to him a properly issued license, as provided for in this act, or who shall violate any of the provisions of this act, shall be adjudged guilty of a misdemeanor, and shall be punished by a fine of one hundred dollars, or, in default of payment thereof, by imprisonment in the county jail for a term of ninety days,
False swearing in application perjury.	§ 6222g. SEC. 7. Any person whose duty it shall be to return a marriage certificate to the county clerk, who shall neglect to return said certificate, shall be adjudged guilty of a misdemeanor, and shall be punished by a fine of not exceeding one hundred dollars or ninety days' imprisonment, or both, in the discretion of the court.
Filing and recording of reports.	§ 6222h. SEC. 8. Any person applying for a marriage license who shall swear to a false statement therein, shall be guilty of perjury and shall be prosecuted therefor under the general laws of the State.
Records of license prima facie evidence.	SEC. 9. All reports of marriage, sent by the county clerks of the various counties of the State to the office of the Secretary of State, shall be preserved on file in that office, and a proper record thereof shall be made and kept.
Repealing clause.	§ 6222i. SEC. 10. The record of any license to marry, or of any marriage certificate in any county clerk's office, or a certified copy thereof, shall be <i>prima facie</i> evidence in any court or proceedings in this State, with the same force and effect as if the original were produced, both as to the facts therein contained and as to the genuineness of the signatures thereto.
	§ 6222k. SEC. 11. All other acts and parts of acts which are inconsistent herewith are hereby repealed.

§ 6222f. Where parties about to marry represented to the clergyman that they have procured the license from the county clerk and it was on the way by mail. *Held*, that the clergyman was guilty of a violation of Act No. 128, P. A. 1887.

The fact that one of the contracting parties was a bigamist and no legal marriage could be performed does not release the clergyman for performing the ceremony. *Held*, that the object of the act is sufficiently embraced in its title and the act is constitutional.

Supreme court, March 6, 1896.

LAWS RELATIVE TO DIVORCE.

DIVORCE.

§ 6223. *Rev. Stat. 1846, Chap. 84; Am. P. A. 1883, Act 24.* **MARRIAGES void without divorce.**
SECTION 1. All marriages which are prohibited by law on account of consanguinity or affinity between the parties, or on account of either of them having a former wife or husband then living, and all marriages solemnized when either of the parties was insane or an idiot, shall, if solemnized within the State, be absolutely void, without any decree of divorce or other legal process: *Provided*, That the issue of such marriage, except that contracted while either of the parties thereto had a former husband or wife living, shall be deemed legitimate. **Proviso.**

§ 6224. SEC. 2. In case of a marriage solemnized when either of the parties was under the age of legal consent, if they shall separate during such non-age, and not cohabit together afterwards, or in case the consent of one of the parties was obtained by force or fraud, and there shall have been no subsequent voluntary cohabitation of the parties, the marriage shall be deemed void without any decree of divorce or other legal process. (*See notes.*) **Idem.**

§ 6224. The legal age of consent is fixed by § 6209. The marriage, when one or both of the parties shall be under the legal age of consent, is voidable, but not void. It may be annulled by the mutual consent of both, or at the election of the party under age, but not at the election of the party of competent age. Upon the latter it is binding: *People v. Slack*, 15 Mich. 193. See § 6254. Voidable only: *Bouker v. People*, 37 Mich. 7. But will be void if the party under age withdraws and refuses to cohabit: *People v. Bennett*, 39 Mich. 209.

As to what frauds (such as duress, pregnancy before marriage) will invalidate a marriage, or authorize a decree of nullity: *Leavitt v. Leavitt*, 13 Mich. 456-7. See *Dawson v. Dawson*, 13 Mich. 335; *Smith v. Smith*, 51 Mich. 607; *Sissung v. Sissung*, 65 Mich. 168; *Harrison v. Harrison*, 94 Mich. 559.

The court granting a decree of divorce has the power to set it aside for fraud in its procurement, or want of jurisdiction, on the application of the party against whom it was obtained, even though the other party may have remarried and children may have been begotten: *Carlisle v. Carlisle*, 96 Mich. 128.

NOTE.—Divorces cannot be granted by the legislature; nor can it authorize the granting of them in special cases not provided for by the general laws of the state: Const. Art. 4, sec. 26; *Taft v. Taft*, 3 Mich. 67.

Jurisdiction over divorce is purely statutory: *Baugh v. Baugh*, 37 Mich. 61; and not within the original cognizance of courts of equity: *Haines v. Haines*, 35 Mich. 145.

Foreign divorces.—The fact that a divorce procured in another state is fraudulent, may be shown collaterally in this state: *People v. Dawell*, 25 Mich. 247.

One who leaves Michigan temporarily to avoid legal process and stays in Indiana a year for the purpose of getting a divorce meanwhile, does not thereby acquire a residence which will give the Indiana courts jurisdiction of his divorce proceedings. And notice of such proceedings, served on the wife in Michigan, need not be heeded: *Reed v. Reed*, 52 Mich. 117.

An Indiana divorce cannot be impeached in a purely collateral civil action in Michigan by seeking to show that the residence of the complainant in the divorce suit was not such as to give the Indiana court jurisdiction: *Waldo v. Waldo*, 52 Mich. 94. In a collateral proceeding depending upon a divorce procured in another state, the court which granted it must be presumed to have had jurisdiction, and to have proceeded on the merits in accordance with the local laws: *Id.*

Suit may be brought to annul void marriage.

§ 6225. SEC. 3. When a marriage is supposed to be void, or the validity thereof is doubted, for any of the causes mentioned in the two preceding sections, either party, excepting in cases where a contrary provision is hereinafter made, may file a petition or bill in the circuit court of the county where the parties, or one of them, reside, or in the court of chancery for annulling the same, and such petition or bill shall be filed and proceedings shall be had thereon, as in the case of a petition or bill filed in said court for a divorce; and upon due proof of the nullity of the marriage, it shall be declared void by a decree or sentence of nullity. (See notes.)

Suit to affirm marriage.

§ 6226. SEC. 4. When the validity of any marriage shall be denied or doubted by either of the parties, the other party may file a bill or petition in the manner aforesaid, for affirming the marriage; and upon due proof of the validity thereof, it shall be declared valid by a decree or sentence of the court; and such decree, unless reversed on appeal, shall be conclusive upon all persons concerned.

Sentence to imprisonment for life dissolves marriage.

§ 6227. SEC. 5. When either party shall be sentenced to imprisonment for life in any prison, jail or house of correction, the marriage shall be thereby absolutely dissolved, without any decree of divorce or other legal process, and no pardon granted to the parties so sentenced, shall restore such party to his or her conjugal rights.

Divorce from bond of matrimony, for what cause may be decreed.

§ 6228. *Am. S. L. 1847, Act 105; 1848, Act 150; 1851, Act 64.* SEC. 6. A divorce from the bonds of matrimony may be decreed by the circuit court of the county where the parties,

§ 6225. See § 6257; *Leavitt v. Leavitt*, 13 Mich. 452.

A bill to annul a marriage for gross duress was sustained where the marriage had never been recognized and complainant was a youth of eighteen whom defendant had brought before a justice, and frightened into marriage on the spot: *Smith v. Smith*, 51 Mich. 407.

§ 6228. Residence of parties, see § 6612. The complainant must be domiciled in this state: *People v. Dawsell*, 25 Mich. 254. A wife may acquire a domicile separate from her husband: *Id.* 263.

Where one of the parties resides in this state and the other in another state, each state has authority to dissolve the marriage: *Wright v. Wright*, 24 Mich. 180; *Van Inwagen v. Van Inwagen*, 86 Mich. 333.

The husband need not reside in Michigan two years before filing his bill for divorce when the desertion complained of is by the wife in another state: *Colburn v. Colburn*, 70 Mich. 647.

Omission to aver residence in county where bill is brought may be cured by amendment: *People v. McCaffrey*, 75 Mich. 115.

Where a divorce is sought by the wife on other grounds than the granting of a prior divorce to the husband in another state; which fact he sets up in a cross-bill in bar to relief sought, the complainant is not required to answer such new matter, nor is the court ousted of jurisdiction to decree the payment of temporary alimony: *Van Inwagen v. Van Inwagen*, 86 Mich. 333.

Bill or petition.—None but the husband and wife can be parties to a suit for divorce. Children and strangers cannot intervene: *Baugh v. Baugh*, 37 Mich., 59; *Peck v. Uhe*, 66 Mich. 562.

Under the R. S., 1838, Title 7, chap. 2, complainant's signature to the affidavit of verification at the foot of the petition was held to be a sufficient signing, etc., *Johnson v. Johnson*, Walk. Ch. 310.

Bill dismissed on failure to establish either civil or common-law marriage: *Rose v. Rose*, 67 Mich. 619; *Van Dusan v. Van Dusan*, 97 Mich. 70.

Process from our courts cannot be served beyond the state boundaries: *Pratt v. Bank of Windsor*, Har. Ch. 254; *McEwan v. Zimmer*, 35 Mich. 768. Nor is service beyond the jurisdiction of the court binding: *Id.* Formerly it was held that service of the subpoena upon the keeper of the state prison, the defendant being confined therein, was sufficient: *Johnson v. Johnson*, Walk. Ch. 310. But see, present chancery rule 10.

Affidavit of non-residence.—Sufficiency of, when no information and belief, etc.; if the affidavit tends to make out what is required as the basis for the order of publication to the satisfaction of the officer, the order will not be void for defect in the proof: *Pettiford v. Zoellner*, 45 Mich. 362.

An order pro confesso, cannot be entered until proof of service of the subpoena is filed: *Eaton v. Eaton*, 33 Mich. 305.

or one of them, reside, or by the court of chancery, on the application by petition or bill of the aggrieved party, in either of the following cases:

First, Whenever adultery has been committed by any husband or wife;

Second, When one of the parties was physically incompetent at the time of the marriage;

Opening proofs.—As to opening proofs and extending time to take testimony to a party who has caused vexatious delays, see *McClung v. McClung*, 40 Mich. 493.

Appeals.—In all appeals the matter is heard in appellate court as if it had not been heard before, and the order made, is such as should have been made below: *Haines v. Haines*, 35 Mich. 143. An appeal lies from a decree granting a divorce, although it orders a reference to determine the amount of temporary alimony to be allowed: *Shaw v. Shaw*, 9 Mich. 164. But the decree cannot be modified in favor of the party not appealing: *Hoff v. Hoff*, 48 Mich. 281.

An appeal by the wife, taken within the statutory period, from a decree of divorce granted to her deceased husband, will be entertained: *Shafer v. Shafer*, 30 Mich. 163. But the representatives of the deceased husband must be brought in before hearing: *Id.*

On appeal from a decree of divorce, the record of a collateral proceeding, in which conveyances by the defendant were set aside, was sent up with the divorce record, but no appeal was taken from the collateral decree. *Held*, that nothing could be done with it: *German v. German*, 57 Mich. 256.

A consent decree cannot be appealed from: *Owen v. Gale*, 75 Mich. 256.

SUBDIVISION 1.—Adultery.—See § 6281. In proceedings for divorce for the cause of adultery, inflexible adherence to the settled forms and practice prescribed for the attainment of justice in courts of equity, should be observed: *Green v. Green*, 26 Mich. 440.

The time, place, and circumstances or occasion of the act charged, and the name of the guilty participant, if known, must be set forth definitely, and with particularity and distinctness: *Dunn v. Dunn*, 11 Mich. 284; *Shoemaker v. Shoemaker*, 20 Mich. 222; *Bennett v. Bennett*, 24 Mich. 482; *Green v. Green*, 26 Mich. 437; *Randall v. Randall*, 31 Mich. 194; *Herrick v. Herrick*, 31 Mich. 298. An allegation that the defendant lived "in open and notorious adultery," naming the time and place and party with whom, etc., is sufficient: *Marble v. Marble*, 36 Mich. 386.

A charge of adultery made after the parties have lived together many years, founded upon suspicious circumstances of which the complainant had notice at the time of marriage, is too late: *Stuart v. Stuart*, 47 Mich. 556.

Amendments to the bill charging adultery must be sworn to in the same manner as the original bill: *Green v. Green*, 26 Mich. 437; *Briggs v. Briggs*, 20 Mich. 40. Facts proved but not alleged in the bill are not to be made available by way of amendment: *Green v. Green*, *supra*.

Proof of, etc.—*Bishop v. Bishop*, 17 Mich. 211. The adultery must be proved by evidence and not by scandal merely: *Soper v. Soper*, 29 Mich. 305. Reputation is not sufficient, but may be received in aid of and as incident to substantial proof: *Marble v. Marble*, 36 Mich. 386.

The proof must be confined strictly to the issue. Proof of adulterous acts not alleged, cannot avail: *Dunn v. Dunn*, 11 Mich. 284; *Shoemaker v. Shoemaker*, 20 Mich. 222; and cannot, in fact, be proved or considered: *Bennett v. Bennett*, 24 Mich. 482; *Green v. Green*, 26 Mich. 437; *Randall v. Randall*, 31 Mich. 194; *Herrick v. Herrick*, 31 Mich. 298. But the charge may be established by circumstantial evidence: *Marble v. Marble*, 36 Mich. 386. And it will be presumed that licentious persons, holding and expressing loose and depraved notions in regard to the marriage relation, will commit such offenses as they have opportunity for, when consorting together: *McClung v. McClung*, 40 Mich. 493.

Proof by particeps criminis.—*Emmons v. Emmons*, Walk. Ch. 534; *Herrick v. Herrick*, 31 Mich. 298. Taking the testimony of children of tender age, as to their parents' guilt, is reprehensible: *Kneale v. Kneale*, 28 Mich. 344; *Crouner v. Crouner*, 44 Mich. 180.

The evidence of a party to the suit, taken without the order of the court, cannot be regarded: *Stuart v. Stuart*, 47 Mich. 556.

Proof of a single act is sufficient. But confessions alone will not establish a case of adultery: See § 6280. *Sawyer v. Sawyer*, Walk. Ch. 52-3.

SUBDIVISION 3.—Sentenced for three years, etc., *Johnson v. Johnson*, Walk. Ch. 309.

SUBDIVISION 4.—Desertion.—What will amount to it: *Porritt v. Porritt*, 18 Mich. 420, 424; *Rudd v. Rudd*, 33 Mich. 101; *Holmes v. Holmes*, 44 Mich. 555.

Desertion can exist only against the will and acquiescence of the deserted party; separation by consent cannot amount to it: *Cooper v. Cooper*, 17 Mich. 210; *Porritt v. Porritt*, 18 Mich. 424; *Cox v. Cox*, 35 Mich. 463. As to what will justify a separation: *Id.*

After a separation, by mutual agreement, nothing but an unconditional and entire resumption of the marriage relations can restore the parties to a position where a new separation could amount to desertion: *Cooper v. Cooper*, 17 Mich. 210.

The desertion must continue without interruption for two full years, and up to the time of filing the bill. Time consumed in mutual consultations, deliberations and treaties for a resumption of the marriage relations, should not be counted: *Rudd v. Rudd*, 33 Mich. 101. The desertion must be proved substantially as alleged: *Id.*

Divorce cannot be granted for desertion except on satisfactory proof: (1) That cohabitation has ceased; (2) that defendant intends desertion; and (3) that the separation is against the will of complainant: *Rose v. Rose*, 50 Mich. 92.

- Imprisonment.** *Third,* When one of the parties has been sentenced to imprisonment in any prison, jail or house of correction, for three years or more; and no pardon granted to the party so sentenced, after a divorce for that cause, shall restore such party to his or her conjugal rights;
- Desertion.** *Fourth,* When either party shall desert the other for a term of two years;
- Drunkards.** *Fifth,* When the husband or wife shall have become an habitual drunkard;
- Power of circuit court.** *Sixth,* And the circuit courts may, in their discretion, upon application, as in other cases, divorce from the bonds of matrimony any party who is a resident of this State, and whose husband or wife shall have obtained a divorce in any other state. (*See notes.*)
- Divorce from bed and board, when may be decreed.** § 6229. *Am. Id., 1847; 1848, Id.* SEC. 7. A divorce from bed and board forever, or for a limited time, may be decreed

Separation of married persons differs from desertion of one by the other; desertion, in Michigan, is wilful abandonment for two years without cause, and against the wish of the person abandoned, and it may even be charged upon the one who stays at home: *Warner v. Warner*, 54 Mich. 492.

A wife who leaves her husband for cruelty, which she reasonably believes makes further residence with him unsafe, is not chargeable with desertion, but he is: *Id.*

Where a husband and wife left his farm and went to reside with her parents, and afterwards separated, but proofs fail to show he went away intending to desert her, no case of desertion is made out: *Dashback v. Dashback*, 62 Mich. 322.

Desertion by wife in another state need not continue two years after husband's removal to Michigan to entitle him to divorce, nor need he have resided here two years before filing his bill: *Colburn v. Colburn*, 70 Mich. 647.

In this case the decree below, adjudging defendant guilty of desertion, is held to have been fully warranted, and is affirmed: *Rathbun v. Rathbun*, 76 Mich. 462.

Where after living peaceably with her husband for 35 years, a wife left her home and went to California and remained, the husband made no effort to induce the wife to return, his bill for divorce on the grounds of desertion is properly dismissed: *Wright v. Wright*, 80 Mich. 572.

Divorce, as for desertion, was granted a husband where his wife had left him against his protest, and in response to peremptory demands he had made provision for her and she had given him a release of claims on his property; and where, also, the parties were old and had been married only a month, and though there was no evidence of collusion, the case was undefended: *Stoffer v. Stoffer*, 50 Mich. 491.

SUBDIVISION 5.—*Habitual drunkard.*—One who has the habit of indulging in intoxicating liquors so firmly fixed that he becomes intoxicated as often as the temptation is presented by his being in the vicinity where they are sold, is an habitual drunkard within the meaning of this section: *Magahay v. Magahay*, 35 Mich. 210. To bring a case within this statute the defendant must have become an habitual drunkard after marriage: *Porritt v. Porritt*, 16 Mich. 141-2. Or, at least, the fact must have been kept concealed from the complainant: *Id.*

The facts, even if true, that a wife is shown by the testimony not to be of the most refined character, and that she has not always been truly ladylike in her behavior, but at times, when in anger, has been guilty of profanity, and has not remonstrated with her husband as she ought, or rebuked him for using liquor to excess, furnish no adequate excuse for the abuse which he is shown to have heaped upon her in his drunken moods, which have been too frequent not to be habitual: *Berryman v. Berryman*, 59 Mich. 605.

Occasional intoxication is not habitual drunkenness in a woman any more than it is in a man: *Meathe v. Meathe*, 83 Mich. 150.

SUBDIVISION 6.—A decree of divorce obtained by one party in another state against the other residing here, whether valid or void, is cause for granting a divorce to the party residing here: *Wright v. Wright*, 24 Mich. 180.

The circuit courts may, in their discretion, divorce from the bonds of matrimony any party who is a resident of this state, and whose husband or wife shall have obtained a divorce in another state, and may order the payment of alimony as in other cases: *Van Inwagen v. Van Inwagen*, 86 Mich. 333.

Where a divorce is sought by the wife on other grounds than the granting of a prior divorce to the husband in another state, which fact he sets up in a cross-bill in bar to the relief sought, the complainant is not required to answer such new matter, nor is the court ousted of the jurisdiction to decree the payment of temporary alimony: *Id.*

§ 6229. *Extreme cruelty.*—This grievance, when a cause for divorce, must be of a most aggravating nature, entirely subverting the family relations by rendering the association intolerable: *Cooper v. Cooper*, 17 Mich. 210. It is not confined to personal violence, or threats of bodily harm: *Id.*; *Chaffee v. Chaffee*, 15 Mich. 186-7.

A long and continuous course of conduct which, without the fault of the other party, results in making the marriage relation unendurable, and in driving the latter from the home of the offender, is extreme cruelty: *Briggs v. Briggs*, 20 Mich. 45-6. So is the persistent circulation of false and slanderous reports derogatory to the wife's character for chastity: *Goodman v. Goodman*, 26 Mich. 417. And so is a wife's habitual

for the ground of extreme cruelty, whether practiced by using personal violence, or by any other means; or for utter desertion by either of the parties for the term of two years; and a like divorce may be decreed on the complaint of the wife, when the husband, being of sufficient ability to provide a suitable maintenance for her, shall grossly or wantonly and cruelly refuse or neglect so to do. (*See notes.*)

and persistent treatment of her husband in an offensive and opprobrious manner, accusing him in public and private of infamous conduct in violation of his marriage obligations, and calling him by vile and vulgar epithets, etc., *Whitmore v. Whitmore*, 49 Mich. 417. So is consorting with and showing or expressing preference for persons of loose morals and unchaste character of the opposite sex: *McClung v. McClung*, 40 Mich. 493. And so is the communication of a venereal disease: *Canfield v. Canfield*, 34 Mich. 519; *Holthoefer v. Holthoefer*, 47 Mich. 280. But the fact that a wife of unimpeached chastity is found to have such a disease, is not sufficient evidence that it was communicated by her husband: *Id.*

Profane, obscene and insulting language, habitually indulged in towards a wife of refined feelings and sensitive nature, may be carried so far as to amount to extreme cruelty: *Bennett v. Bennett*, 24 Mich. 484-5. See *Briggs v. Briggs*, 20 Mich. 45-6; *Goodman v. Goodman*, 26 Mich. 417; *Palmer v. Palmer*, 45 Mich. 150; 54 Mich. 492; *Whitacre v. Whitacre*, 64 Mich. 232.

A single act of causeless violence is not sufficient: *Briggs v. Briggs*, *supra*. Nor are mutual wranglings and exhibitions of unruly temper: *Cooper v. Cooper*, 17 Mich. 210; *Johnson v. Johnson*, 49 Mich. 639; *Morrison v. Morrison*, 64 Mich. 53. Acts not amounting to: See *Soper v. Soper*, 29 Mich. 305; *Cox v. Cox*, 35 Mich. 461; *Lapp v. Lapp*, 43 Mich. 287. As to when vile and indecent language will not amount to: *Briggs v. Briggs*, 20 Mich. 43; *Holmes v. Holmes*, 44 Mich. 555. As to harsh language and recriminatory charges: See *Bishop v. Bishop*, 17 Mich. 211. Neglect to look after household affairs: *Bennett v. Bennett*, 24 Mich. 484. And as to cruelty towards the children and other members of the household: *Chaffee v. Chaffee*, 15 Mich. 186-7. A husband cannot complain of cruelty when he is at the same time denying to his wife all consideration due to her as such: *Holmes v. Holmes*, 44 Mich. 555. Nor can either complain of violence in their quarrels, from which one suffers as much as the other: *Soper v. Soper*, 29 Mich. 305. And See *Hoff v. Hoff*, 48 Mich. 281; *Minde v. Minde*, 65 Mich. 633.

It is extreme cruelty to turn a wife and her daughter out of doors without cause, and to make their separation the condition of taking the wife back again: *Friend v. Friend*, 53 Mich. 543.

It is extreme cruelty for a husband to wantonly neglect his wife in critical illness and to address her at such times in harsh and brutal language: *Hoyt v. Hoyt*, 56 Mich. 50.

More irascibility and harshness are no ground for divorce, especially when purposely provoked by tantalizing conduct: *German v. German*, 57 Mich. 256.

When specific acts of cruelty are not specified in the bill, no proof of such cruelty is admissible: *Dashback v. Dashback*, 62 Mich. 322.

In case the court find the charges of cruelty made in the bill substantiated by the evidence, and grant complainant the relief prayed for: *Taylor v. Taylor*, 73 Mich. 286.

When the husband deeds the homestead to his wife, and she refuses to cohabit, and finally drives him from the house and then rents it, a case of extreme cruelty exists: *Menzer v. Menzer*, 83 Mich. 319.

It is extreme cruelty for the husband to compel his wife to do more work than she is capable of performing: *De Zwaan v. De Zwaan*, 91 Mich. 279.

As to what constitutes condonation: *Runkle v. Runkle*, 96 Mich. 493.

Where a bill for divorce charges both extreme cruelty and adultery, collusion cannot be inferred from the filing of a stipulation striking the latter charge therefrom: *Holcomb v. Holcomb*, 100 Mich. 421.

Where husband and wife lived together a few days after bill filed by husband, and then separated, the wife filing answer, charging drunkenness and cruelty, *held*, that the court did not lose jurisdiction by the subsequent cohabitation, nor was it a bar to divorce for cruelty: *Tackaberry v. Tackaberry*, 101 Mich. 102.

Pleadings and proofs.—The specific acts of cruelty relied upon as cause for divorce, should be distinctly set forth in the bill. And must be proved as alleged. But evidence of cruelty is not confined to the acts charged; others tending to characterize those alleged, may be shown: *Briggs v. Briggs*, 20 Mich. 41; *Bennett v. Bennett*, 24 Mich. 482.

A party coming into a court of equity, and asking to be released from the bonds of matrimony and its obligations, must come with clean hands, and must keep them clean, so far as relates to the procurement of testimony to make out his case: *Van Voorhis v. Van Voorhis*, 94 Mich. 60.

Failure to support.—In a bill for a limited divorce on the ground of refusal to support, an allegation charging the defendant with "inhuman and cruel treatment," and that "he had grossly, wantonly and cruelly refused and neglected to provide a suitable maintenance," etc., sets forth the cause with sufficient particularity. In such a case, it is not necessary to aver any cruel treatment, except what is involved in the gross, wanton and cruel neglect and refusal to support the wife, the defendant being of sufficient ability, etc. Under such averments, all those facts and circumstances tending to show that the refusal and neglect were gross, wanton and cruel, are admissible in evidence: *Brown v. Brown*, 22 Mich. 242.

As to what acts will warrant a wife in leaving her husband and claiming support elsewhere: See *Brown v. Brown*, 22 Mich. 242; *Randall v. Randall*, 37 Mich. 574.

Willingness to support his wife in his own home, is no defense to her right to have support elsewhere, when his treatment of her is such as to render it unsafe and improper for her to reside and cohabit with him: *Brown v. Brown*, 22 Mich. 242.

Divorce from bond of matrimony, for same causes.

In what cases divorce not to be granted.

As to time of residence in the State.

In case persons domiciled out of State.

§ 6230. SEC. 8. A divorce from the bond of matrimony may be decreed for either of the causes mentioned in the preceding section, whenever, in the opinion of the court, the circumstances of the case shall be such that it will be discreet and proper so to do. (*See notes.*)

§ 6231. *Am. P. A. 1887, Act 137; 1895, Act 202.* SEC. 9. No divorce shall be granted unless the parties exhibiting the petition or bill of complaint therefor shall have resided in this State one year immediately preceding the time of exhibiting such petition or bill, or unless the marriage was solemnized in this State, and the complainant shall have resided in this State from the time of such marriage to the time of exhibiting the petition or bill; and when the causes for divorce occurred out of this State, no divorce shall be granted unless the complainant or defendant shall have resided within this State two years next preceding the filing of the petition or bill, and no proofs or testimony shall be taken in any cause until four months after the filing of such petition or bill for divorce, except where the cause for divorce is desertion, or when the testimony is taken conditionally for the purpose of perpetuating such testimony, nor shall any decree of divorce be granted in any case unless the defendant be domiciled within this State or shall have been domiciled herein at the time the cause for divorce arose, or unless the defendant shall have been personally served with process in this State, or with copy of the order of publication in said cause, or has voluntarily appeared in such action or proceeding. Where the defendant shall not be domiciled in this State or shall not have been domiciled herein at the time the cause of action arose, the plaintiff must prove either that the parties have lived together in this State as husband and wife or that the plaintiff has in good faith resided in this State for at least one year next preceding the commencement of the proceeding. (*See notes.*)

A husband's obligation to support his wife, is to support her in his own family, and not elsewhere, unless his conduct towards her is such as to make it unsafe for her to live and cohabit with him: *Randall v. Randall*, 37 Mich. 563. And her coextensive obligation is to render family services: *Id.* And the wife's right is to be supported in her husband's domicile unless she has lost it by her misbehavior: *Snyder v. People*, 26 Mich. 109.

As to failure to support, see *Chaffee v. Chaffee*, 15 Mich. 187.

An absolute divorce will be granted wife where proof shows the husband of "sufficient ability" to maintain her, but grossly and wantonly fails to do so: *Dashback v. Dashback*, 62 Mich. 322; *Whitacre v. Whitacre*, 64 Mich. 232.

Habits of frugality not constituting failure to support: *Runkle v. Runkle*, 96 Mich. 493. Decree of separation.—As to decreeing a separation from bed and board, upon a bill for divorce from the bonds of matrimony: See *Sawyer v. Sawyer*, Walk. Ch. 53; *Skillman v. Skillman*, 18 Mich. 458.

§ 6230. The court, on review of the testimony, changed the decree of the circuit court for a separation from bed and board for two years, to an absolute one from the bonds of matrimony: *Burlage v. Burlage*, 65 Mich. 624.

The decree below, dismissing bill, was reversed and absolute divorce granted, on ground of cruelty: *Thompson v. Thompson*, 79 Mich. 124.

§ 6231. R. S. 1838, p. 337, sec. 6; Laws of 1842, Act 72, p. 116; 1844, Act 60, p. 74: *Emmons v. Emmons*, Walk. Ch. 532, and § 6228, and note.

Where complainant avers she has been a resident of this state "for more than one year immediately preceding the filing of her bill of complaint," and a plea has been entered, but the averment has not been demurred to, the court has jurisdiction while the case is pending, and may grant and enforce temporary alimony: *Filer v. Filer*, 71 Mich. 469.

Time of taking proofs and testimony in any divorce suit: *Daly v. Hosmer*, 102 Mich. 393.

§ 6232. *Am. 1887, Act 137.* SEC. 10. No divorce shall be decreed in any case when it shall appear that the petition or bill therefor was founded in or exhibited by collusion between the parties; and the oath or affirmation administered to the complainant in swearing to such petition or bill shall, in addition to all other legal requirements, recite the following: "And you do solemnly swear (or affirm) that there is no collusion, understanding or agreement whatever between yourself and the defendant herein in relation to your application for divorce." And no divorce shall be decreed in any case where the party complaining shall be guilty of the same crime or misconduct charged against the respondent. (*See notes.*)

Oath of complainant.

§ 6233. SEC. 11. A petition or bill for a divorce may be exhibited by a wife in her own name, as well as a husband; and in all cases the respondent may answer such bill without oath or affirmation.

Bill or petition by wife in her own name; answer without oath.

§ 6234. SEC. 12. Suits to annul or affirm a marriage, or for a divorce, shall be conducted in the same manner as other suits in courts of equity; and the court shall have power to award issues, to decree costs, and to enforce its decrees, as in other cases. (*See notes.*)

Suits, how conducted.

§ 6232. *Collusion.*—The bill must allege on oath that the causes for divorce were not committed with the consent, connivance, privacy or procurement of the complainant, etc. Chancery Rule 35; *Briggs v. Briggs*, 20 Mich. 40. Hence, if any fact is introduced into the bill by way of amendment, the bill must be again sworn to, to meet this requirement: *Id.* Or the amendment must be verified the same as the bill: *Green v. Green*, 26 Mich. 437.

As to collusion: See *Sawyer v. Sawyer*, Walk. Ch. p. 52; *Emmons v. Emmons*, *Id.*, 532. If collusion appears, a decree must be denied: *People v. Dawell*, 25 Mich. 258; *Porritt v. Porritt*, 18 Mich. 425-6. Entering into arrangements and understandings between the parties to secure a divorce, immediately after the filing of the bill, is collusive and an attempted fraud upon the law: *Briggs v. Briggs*, 20 Mich. 45. Defendant's appearance entered for the purpose of enabling the complainant to obtain a decree speedily, is evidence of collusion: *People v. Dawell*, 25 Mich. 248, 253. Cohabitation during the progress of proceedings for divorce, indicates collusion: *Porritt v. Porritt*, 18 Mich. 425-6. If an answer is withdrawn, no decree should be granted without satisfactory evidence that the withdrawal was voluntary and not collusive: *Leavitt v. Leavitt*, 13 Mich. 455.

A party to a divorce suit is not estopped as to the main issue by a decree entered by his own procurement, since collusive divorces are unlawful: *Friend v. Friend*, 53 Mich. 543.

An agreement to accept \$5 for all claims and alimony is collusive: *Thompson v. Thompson*, 70 Mich. 62.

This section, 6232, is based on public policy, which forbids annulment of the marriage contract by agreement of the parties: *Id.*

Requirement of oath denying collusion is mandatory: *Ayres v. Gartner*, 90 Mich. 390.

When mandamus will issue to dismiss a bill for want of oath denying collusion: *Id.*

Where original bill is verified, objection that amendment is not verified, is without force: *Tackaberry v. Tackaberry*, 101 Mich. 102.

Objection on appeal that answer to cross-bill is not sworn to, is too late: *Id.*

Where a bill for divorce charges both extreme cruelty and adultery, collusion cannot be inferred from the filing of a stipulation striking the latter charge therefrom: *Holcomb v. Holcomb*, 100 Mich. 421.

An answer in a divorce suit, in the nature of a cross-bill filed under chancery rule No. 123, must be verified in order to authorize a decree for the defendant, but, if not, it may be amended, where the proof shows an absence of collusion: *Harrison v. Harrison*, 94 Mich. 559.

Amendment to verification to answer so as to negative the existence of collusion, is within the discretion of the court: *Daly v. Hoemer*, 102 Mich. 392.

When a decree is granted upon a bill denying collusion, a subsequent bill by the same complainant to set aside that decree for collusion, will not be entertained: *Simmons v. Simmons*, 47 Mich. 253.

But a decree is not to be treated as void on the ground of collusion, until reversed: *People v. Dawell*, 25 Mich. 249.

Equally guilty, etc.—Where both parties are guilty of such conduct as is cause for divorce, neither should be allowed a decree: *Hoff v. Hoff*, 48 Mich. 281.

§ 6234. *Sawyer v. Sawyer*, Walk. Ch. 48.

Practice.—A divorce bill cannot be amended by substituting a prayer that the marriage be annulled: *Schafberg v. Schafberg*, 52 Mich. 429.

Proofs bearing on the question of permanent alimony ought not to be taken until it has been determined by the court whether a divorce shall be decreed: *Rea v. Rea*, 53 Mich. 40.

Court may require husband to pay expenses.

Costs.

§ 6235. SEC. 13. In every suit brought, either for a divorce or for a separation, the court may, in its discretion, require the husband to pay any sums necessary to enable the wife to carry on or defend the suit during its pendency, and it may decree costs against either party, and award execution for the same, or it may direct such costs to be paid out of any property sequestered, or in the power of the court, or in the hands of a receiver. (*See notes.*)

Where a divorce bill does not ask for alimony and the decree does not award it, a motion to amend the decree by adding a reference to a circuit court commissioner to take proofs as to alimony, is properly denied as neither pleadings nor decree contain anything to which the subject matter of the motion is germane; the proper remedy in chancery, if there is any, is by supplemental bill in the nature of a bill of review: *Jordan v. Jordan*, 53 Mich. 551.

Appeal lies from an order in a divorce suit overruling a plea of no marriage: *Cross v. Cross*, 54 Mich. 115.

Where a plea is overruled with leave to answer within a limited time, it seems that taking an appeal before the expiration of that period may be treated as an election to stand by the plea, and the appeal may be sustained accordingly: *Id.*

The death of the complainant in divorce extinguishes the suit and the whole ground of action: *Zoellner v. Zoellner*, 46 Mich. 511.

An unexcused delay of nine years, and until after the death of the other party, in attacking a decree of divorce, is fatal to a proceeding to set it aside for the purpose of obtaining an interest in decedent's estate: *Id.*

Where no relief is sought not dependent on divorce there can be no decree after death has separated the parties: *Wilson v. Wilson*, 73 Mich. 620.

The dismissal of a bill for divorce on the ground of the illegality of the marriage sought to be dissolved cannot affect the right of the complainant to file a second bill for the dissolution of a later legal marriage: *Filer v. Filer*, 77 Mich. 469.

The failure of a complainant to appeal from a decree dismissing her bill for divorce will not preclude her from resisting the claim of the defendant to a decree declaring the marriage void for fraud practiced upon him, he having prayed for such affirmative relief in his answer: *Nadra v. Nadra*, 79 Mich. 591.

Case remanded to adduce proofs as to defendant's and complainant's property: *Reynolds v. Reynolds*, 92 Mich. 104.

A party coming into a court of equity, and asking to be released from the bonds of matrimony and its obligations, must come with clean hands, and must keep them clean, so far as relates to the procurement of testimony to make out his case: *Van Voorhis v. Van Voorhis*, 94 Mich. 60.

A second wife, who becomes such in reliance upon a decree of divorce granted her husband, is entitled to notice of a petition by the first wife to vacate the decree: *Carlisle v. Carlisle*, 96 Mich. 123.

Where original bill is verified, objection that amendment, filed by stipulation, is not so sworn to, is without force: *Tackaberry v. Tackaberry*, 101 Mich. 102.

Objection first made on appeal that answer to cross-bill is not sworn to is too late: *Id.*

§ 6235. *Temporary alimony—expense money, etc.*—If a wife has no means of her own, to support herself and defray the expenses of carrying on, or defending a suit for divorce, and her husband has property, the court will order him to advance suitable sums to her for those purposes: *Story v. Story*, Walk. Ch. 421; *Goldsmith v. Goldsmith*, 6 Mich. 235. This section makes no mention of temporary alimony, but so far as the statute goes, it is only confirmatory of the common law which was acted on by our courts before there was any statute on the subject: *Goldsmith v. Goldsmith*, *supra*. The right to grant temporary alimony has always been recognized in divorce suits when the circumstances required it. And whether this § 6235 would include advances for support, or must be strictly confined to legal expenses, is not important, as such allowances have always been upheld when necessary to prevent a failure of justice: *Haines v. Haines*, 35 Mich. 143-4.

But an allowance will not be made to a wife where the bill does not bring her within any recognized equity: *Lapp v. Lapp*, 43 Mich. 237. Nor will temporary alimony and expense money be ordered unless it is shown by the bill, or by petition, that she has no property and that her husband has: *Ross v. Ross*, 47 Mich. 185; *Story v. Story*, Walk. Ch. 421. There is no presumption in Michigan that a wife has no property of her own: *Ross v. Ross*, *supra*.

Affidavits denying the cause alleged, or defense set up by the wife, will not prevent an allowance. But they should be received to aid the court in the exercise of its discretion as to the amount of the allowance: *Story v. Story*, Walk. Ch. 421-2.

Merely technical irregularities in the proceedings of the complainant in a divorce suit will not excuse non-compliance with and order to pay temporary alimony, or defeat its enforcement: *Froman v. Froman*, 53 Mich. 581.

Temporary alimony is properly allowed even where the wife has independent property of her own, if in her application therefor she shows what her property is, and that her income from it is insufficient for her support: *Ross v. Ross*, 53 Mich. 585.

An allowance of temporary alimony is not assignable, and it is against public policy for the wife to bargain it away in advance of receiving it: *Jordan v. Westerman*, 62 Mich. 170.

An order allowing complainant \$8 per week as temporary alimony is held a reasonable one: *Potts v. Potts*, 68 Mich. 492.

The possession by a wife of non-productive property, as cited in *Ross v. Griffin*, 53 Mich. 8, will not prevent the allowance of temporary alimony: *Id.*

§ 6236. SEC. 14. After the exhibiting of a petition or bill in a suit to annul a marriage or for a divorce, whether from the bond of matrimony or from bed and board, the court may

Court may prohibit restraint of liberty of wife.

Where a husband informs his wife that he will not pay temporary alimony awarded her by the court, a formal demand on her part is unnecessary to lay the foundation for contempt proceedings: *Id.*

Pending a decision as to the sufficiency of a plea of a prior adjudication, filed by a husband to a bill for divorce, the court has jurisdiction of the matter of allowance of temporary alimony: *Filer v. Filer*, 77 Mich. 469.

Where a bill for divorce alleges a marriage out of the state, and acts of cruelty immediately following such marriage, without locating the place and where the cause of divorce occurred or inflection of dates, the court has a right to grant temporary alimony while the case is pending: *Id.*

Case remanded for determination of alimony and expenses: *Reynolds v. Reynolds*, 92 Mich. 104.

The amount of the allowances and expense money must be confined to what is reasonably necessary in each case: *Haines v. Haines*, 35 Mich. 144. When a husband's means are not sufficient to maintain his wife and family without the assistance of their labor, she should not receive an allowance so large as to enable her to live in idleness: *Brown v. Brown*, 22 Mich. 242.

Reference may be made to a commissioner to ascertain and report as to the amount of a suitable allowance: *Story v. Story*, Walk. Ch. 421.

The decision of the trial court as to the amount of temporary alimony to be allowed in a divorce suit, should be conclusive unless the discretion of the court in making the allowance has been abused: *Froman v. Froman*, 53 Mich. 581.

The amount of temporary alimony to be allowed must be left to the discretion of the trial court, and the order therefor is not subject to appeal unless such discretion has been abused: *Ross v. Ross*, 53 Mich. 585; *Rossman v. Rossman*, 62 Mich. 429.

A married woman may make herself chargeable with the value of services rendered, by an attorney, upon her employment to secure a divorce from her husband, and the husband is not liable for such services: *Wolcott v. Patterson*, 100 Mich. 227.

On appeal.—Temporary alimony and expense money may be continued, or allowed to the wife up to the final determination of the cause on appeal: *Bishop v. Bishop*, 17 Mich. 211. Allowed on appeal: See *Goldsmith v. Goldsmith*, 6 Mich. 285; *Chaffee v. Chaffee*, 14 Mich. 463; *Skilman v. Skilman*, 18 Mich. 458; *Cooper v. Cooper*, 17 Mich. 205, 211; *McClung v. McClung*, 40 Mich. 498-9. And damages may be allowed for vexatious delays in paying it: *Id.* And see, in case of an appeal by the wife from a decree obtained by her deceased husband: *Shafer v. Shafer*, 30 Mich. 163. The allowance made at circuit for support, will not be increased in the supreme court without additional evidence: *Goodman v. Goodman*, 28 Mich. 417.

But alimony pending an appeal is not a matter of course, nor of right, and will not be granted on the wife's appeal without showing that the appeal is reasonable and in good faith, and that an allowance is necessary to prevent a failure of justice and to prevent her from suffering: *Ziegenfuss v. Ziegenfuss*, 21 Mich. 414; *Holthoefer v. Holthoefer*, 47 Mich. 643. And may be regulated according to the behavior of the parties: *Hoff v. Hoff*, 48 Mich. 281. Or discontinued for the misconduct of the wife: *Goldsmith v. Goldsmith*, 6 Mich. 285.

Costs of appeal allowed to wife, where husband was granted a divorce and had \$25,000 in property and wife was without means: *Van Voorhis v. Van Voorhis*, 90 Mich. 276.

Allowance of costs in the supreme court: See *Chaffee v. Chaffee*, 14 Mich. 463; *Skilman v. Skilman*, 18 Mich. 458; *Lapham v. Lapham*, 40 Mich. 527; *Stevens v. Stevens*, 49 Mich. 504.

Costs in equity are not of absolute right; and in dismissing a divorce bill filed by a woman who could not prove a marriage, but with whom defendant had lived in intimate relations, both parties were left to pay their own costs: *Cross v. Cross*, 55 Mich. 280.

Costs were withheld from both parties on reversing a decree for divorce against a husband, where the latter had already been put to great expense: *German v. German*, 57 Mich. 257.

No solicitor's fees beyond what had been previously allowed was included in the costs awarded complainant in divorce, upon reversing a decree dismissing her bill on demurrer, and directing it to be answered: *Van Driele v. Van Driele*, 55 Mich. 273.

Appeal from allowance of temporary alimony.—The allowance of temporary alimony and expense money at the circuit, being discretionary, an appeal does not lie therefrom: *Haines v. Haines*, 35 Mich. 144; *Lapham v. Lapham*, 40 Mich. 527; *Cooper v. Mayhew*, 40 Mich. 528; *Ross v. Ross*, 47 Mich. 185.

Execution—costs.—The issue of execution authorized by this § 6235, is only for the collection of costs—such costs are decreed: *Haines v. Haines*, 35 Mich. 145.

Payment of temporary alimony and expense money can be enforced only by process as for contempt: *Haines v. Haines*, 35 Mich. 145. These allowances do not come within the language of the § 6235, covering costs, and cannot therefore be collected by execution: *Id.*; *North v. North*, 39 Mich. 67; *Palmer v. Palmer*, 45 Mich. 152. See *Peltier v. Peltier*, Har. Ch. 28.

A defendant cannot be committed for contempt under § 7280, upon an *ex parte* showing of his non-performance of an order for the payment of temporary alimony and expense money. He must have an opportunity to be heard in his defense: *Stellar v. Stellar*, 25 Mich. 159. And cannot be committed unless there has been a demand of payment and refusal to pay: *Brown v. Brown*, 22 Mich. 299.

An order of commitment for non-payment is appealable: *Ross v. Ross*, 47 Mich. 185. And it seems that such an order cannot be maintained if it was granted without a proper showing that the wife had no means of her own: *Id.* But the regularity of a commitment for contempt in refusing to pay alimony will not be reviewed collaterally on an application for a writ of *habeas corpus*, if regular on its face: *Matter of Bissell*, 40 Mich. 63.

at any time, either in term of vacation, on the petition of the wife, prohibit the husband from imposing any restraint on her personal liberty during the pendency of the suit.

Care and main-
tenance of chil-
dren during
pendency of
suit. § 6237. SEC. 15. The court may, in like manner, on the application of either party, make such order concerning the care and custody of the minor children of the parties, and their suitable maintenance, during the pendency of such suit, as shall be deemed proper and necessary, and for the benefit of the children.

Order in rela-
tion to care,
etc., of chil-
dren on final
decree. § 6238. SEC. 16. Upon pronouncing a sentence or decree of nullity of a marriage, and also upon decreeing a divorce, whether from the bond of matrimony or from bed and board, the court may make such further decree as it shall deem just and proper, concerning the care, custody and maintenance of the minor children of the parties, and may determine with which of the parents the children, or any of them, shall remain. (*See notes.*)

Decree may be
revised, and
new decree
made. § 6239. SEC. 17. The court may, from time to time afterwards, on the petition of either of the parents, revise and alter such decree concerning the care, custody and maintenance of the children, or any of them, and make a new decree concerning the same, as the circumstances of the parents, and the benefit of the children, shall require. (*See notes.*)

When wife en-
titled to her
real estate. § 6240. SEC. 18. Whenever the nullity of a marriage, or a divorce from the bond of matrimony for any cause, excepting that of adultery committed by the wife, shall be decreed, and when the husband shall be sentenced to imprisonment for life, and also upon every divorce from bed and board, the wife shall be entitled to the immediate possession of all her real estate, in like manner as if her husband were dead. (*See notes.*)

Restoration of
personal estate
to wife. § 6241. SEC. 19. Upon every such dissolution of a marriage as is specified in the preceding section, and also upon every divorce from bed and board, the court may make a further decree for restoring to the wife the whole, or such part as it shall deem just and reasonable, of the personal estate that shall have come to the husband by reason of the marriage, or for awarding to her the value thereof, to be paid by her husband in money. (*See notes.*)

Trustees, when
may be ap-
pointed. § 6242. SEC. 20. Upon every divorce for adultery committed by the husband, and upon every divorce from bed and

§ 6238. Upon a decree granted to the wife on the ground of cruelty, she is *prima facie* entitled to the custody of the children of tender age: *Klein v. Klein* 47 Mich. 513. See § 6294.

Although the children may remain with the mother, the father's legal duty to them is to provide for their support; and as against the public and the children, he cannot throw off this duty: *Courtright v. Courtright*, 40 Mich. 633.

Where a divorced woman, to whom the care, management, and maintenance of a daughter was decreed, remarried; the second husband is not liable for support of the child, nor could the wife make a contract with her second husband which would bind its father for the support of the child: *Johnson v. Onsted*, 74 Mich. 437.

§ 6239. Divorced wife awarded the custody of her infant daughter because the father failed in his agreement, made before divorce granted, to properly care for her: *Flory v. Ostrom*, 92 Mich. 622.

§ 6240. See *Johnson v. Johnson*, Walk. Ch. 313, and § 6287.

A husband and wife take as tenants by *entirety*, and not as *joint tenants*, under a joint deed to both; and the estate thus created, with the attendant right of survivorship, is not affected by a decree of divorce: *Lewis's Appeal*, 85 Mich. 340.

§ 6241. *Harrison v. Harrison*, 49 Mich. 240.

board for any cause, when any personal estate of the wife, or money in lieu thereof, shall be awarded to her, as provided in the preceding section, the court, instead of ordering the same to be delivered or paid into the hands of the wife, may order it to be delivered or paid into the hands of a trustee or trustees, to be appointed by the court, upon trust to invest the same, and to apply the income thereof to the support and maintenance of the wife, and of the minor children of the marriage, or any of them, in such manner as the court shall direct.

§ 6243. SEC. 21. Such trustees shall also pay over the principal sum to the wife and children of the marriage, when ordered by the court, in such proportions, and at such times as the court shall direct, regard being had, in the disposition of the said income, as well as of the principal sum, to the situation and circumstances of the wife and children; and the said trustees shall give such bonds as the court shall require, for the faithful performance of their trust.

Duties of trustees, their bonds.

§ 6244. SEC. 22. Whenever the court shall think proper to award to the wife any of her personal estate, or any money in lieu thereof, in pursuance of the foregoing provisions, such court may require the husband to disclose on oath what personal estate has come to him by reason of the marriage, and how the same has been disposed of, and what portion thereof still remains in his hands.

Husband may be required to disclose on oath.

§ 6245. Am. 1877, Act 91. SEC. 23. Upon every divorce from the bond of matrimony for any cause except that of adultery committed by the wife, and also upon every divorce from bed and board for any cause, if the estate and effects awarded to the wife shall be insufficient for the suitable support and maintenance of herself and such children of the marriage as shall be committed to her care and custody, the court may further decree to her such part of the personal estate of the husband and such alimony out of his estate, real and personal, to be paid to her in gross or otherwise as it shall deem just and reasonable, having regard to the ability of the husband and the character and situation of the parties, and all the other circumstances of the case. (See notes.)

Court may further decree alimony.

§ 6245. See *Sawyer v. Sawyer*, Walk. Ch., 53, and Laws of 1843, Act 6, p. 7, subsequently enacted. Practice in awarding alimony: *Briggs v. Briggs*, 20 Mich. 48.

A decree for alimony vests no absolute right in the wife thereto: *Perkins v. Perkins*, 10 Mich. 425.

A bill for alimony merely, cannot be maintained: *Peltier v. Peltier*, Har. Ch. 19. Courts of equity have no inherent power, as such, to decree permanent alimony at all. The power is statutory and incident to the jurisdiction over applications for divorce. The statute prescribes the entire powers and regulations on the subject: *Perkins v. Perkins*, 16 Mich. 187.

A recent statute, Act 152 of the Laws of 1873, seems now to provide for filing a bill for alimony and support merely, in certain cases of desertion and neglect by the husband. See the act, §§ 6291-3.

A gross sum for alimony may be decreed: *Hamilton v. Hamilton*, 37 Mich. 606-8; *Taylor v. Gladwin*, 40 Mich. 234-5. And should be awarded in gross in preference to an annuity when there is reason to apprehend vexatious delays in payment of the latter: *McClung v. McClung*, 40 Mich. 498. When a gross sum is awarded, if the husband's property consists wholly in lands, it seems that he may be given his election to pay in money, or in lands to be set off under the supervision of a commissioner and confirmed by the court: *Hamilton v. Hamilton*, *supra*.

As to the amount of the allowance when in gross, see *Hamilton v. Hamilton*, *supra*. When a husband's property and income are not sufficient to maintain his wife and family without the aid of their labor, she will not be entitled to an allowance so large as to enable her to live without exertion on her own part: *Brown v. Brown*, 22 Mich. 242.

When wife entitled to dower.

§ 6246. *Am. S. L. 1850, Act 165. SEC. 24.* When the marriage shall be dissolved by the husband being sentenced to imprisonment for life, and when a divorce shall be decreed for the cause of adultery committed by the husband, or for the misconduct or habitual drunkenness of the husband, or on account of his being sentenced to imprisonment for a term of three years or more, the wife shall be entitled to her dower in his lands in the same manner as if he were dead; but she shall not be entitled to dower in any other case of divorce. (*See notes.*)

SEC. 25 and 26. *Repealed P. A. 1877, Act 39, Sec. 1.*

Security for payment of alimony.

§ 6247. *Am. S. L. 1865, Act 255; P. A. 1877, Act 44.* SEC. 27. In all cases where alimony or other allowance shall be decreed to the wife or children, the court may require sufficient security to be given by the husband for the payment thereof according to the terms of the decree, and upon the neglect or

As to an allowance when the defendant has previously obtained a divorce in another state: *Wright v. Wright*, 24 Mich. 180.

Alimony refused, where it appeared that the wife had already received from her husband a substantially due share of his property: *Stevens v. Stevens*, 49 Mich. 504.

An allowance of alimony can be questioned only on appeal, and not collaterally: *Taylor v. Gladwin*, 40 Mich. 232.

But it seems that a personal decree for alimony against a non-resident defendant who has not been served with process, and has not appeared in the suit, is of no effect: *See Lawrence v. Fellows*, Walk. Ch. 468; *Outhwaite v. Porter*, 13 Mich. 540; *McEwan v. Zimmer*, 33 Mich. 765; *Booth v. Conn.*, etc., *Ins. Co.*, 43 Mich. 299.

Where a divorce bill does not ask for alimony and the decree does not award it, a motion to amend the decree by adding a reference to a circuit court commissioner to take proofs as to alimony, is properly denied, as neither pleadings nor decree contain anything to which the subject matter of the motion is germane; the proper remedy in chancery, if there is any, is by supplemental bill in the nature of a bill of review: *Jordan v. Jordan*, 53 Mich. 550.

An allowance of temporary alimony is not assignable, and it is against public policy for the wife to bargain it away in advance of receiving it: *Jordan v. Westerman*, 62 Mich. 170.

A suit for divorce is not a proper proceeding in which to secure an accounting for the wife's property, which was her separate estate: *Peck v. Peck*, 66 Mich. 536; *Letts v. Letts*, 73 Mich. 139.

§ 6246. A woman who obtains a divorce cannot be deprived, without her consent, of her right of dower: *Friend v. Friend*, 53 Mich. 543.

"Extreme cruelty," is such misconduct as is contemplated by § 6246, and entitles a wife to dower in the lands of her husband on securing a divorce from him on that ground: *Rea v. Rea*, 63 Mich. 267.

In *Rea v. Rea*, 53 Mich. 40, the alimony awarded the plaintiff was not intended to and did not interfere with her dower right in her husband's lands. A mortgage given on said real estate by the husband, to raise money to pay alimony, cannot be deducted from the value of said premises: *Id.*

The right of a divorced wife to dower must be governed, as far as practicable, by the same rules and proceedings as if the husband were dead: *Id.*

A wife who has obtained a divorce for adultery can thereafter maintain ejectment for dower in the lands of her husband, whether he be living or dead: *Percival v. Percival*, 56 Mich. 297.

The right of a divorced woman to dower becomes vested as soon as decree becomes final: *Id.* *See Orth v. Orth*, 69 Mich. 153.

A wife entitled to dower on a divorce from her husband, is entitled to dower in the surplus arising upon a foreclosure sale under a mortgage executed prior to their marriage: *Bowles v. Hoard*, 71 Mich. 150.

Consent decree a bar to any claim by the wife to dower. *See Owen v. Yale*, 75 Mich. 256.

§ 6247. This section applies to permanent alimony only: *Palmer v. Palmer*, 45 Mich. 152.

Previous to the amendment of 1877 to this section, it was held that the court could not decree a lien on real estate for the payment of alimony: *Perkins v. Perkins*, 16 Mich. 162.

As to the mode of enforcing payment, see *Id.* 167-8.

Where a decree giving the wife one-third of her husband's property for alimony permitted him to discharge it by setting off to her \$10,000 in land, it was held that the lands should be estimated to her according to the value as shown by the proofs in the case, and not by a subsequent enhanced valuation: *McClung v. McClung*, 42 Mich. 53.

Payment of permanent alimony is to be enforced by execution: *Taylor v. Gladwin*, 40 Mich. 232. So, where after a divorce granted, a subsequent order is made for the payment of an allowance for the support of children, it is to be enforced by execution, and not by process as for contempt: *North v. North*, 39 Mich. 67.

Proofs bearing on the question of permanent alimony ought not to be taken until it has been determined by the court whether a divorce shall be decreed: *Rea v. Rea*, 53 Mich. 40.

It seems that the injunction prohibiting a defendant in divorce from mortgaging his property, does not restrain him from mortgaging real estate aside from his homestead for the purpose of raising money to pay alimony: *Froman v. Froman*, 53 Mich. 581.

refusal of the husband to give such security, or upon his failure to pay such alimony or allowance, the court may award execution for the collection of the same, or the court may sequester his real and personal estate, and may appoint a receiver thereof, and cause such personal estates and the rents and profits of such real estate to be applied to the payment thereof; and in case the real estate of the husband shall consist wholly or in part of wild and uncultivated lands, or any other unproductive estate, the court shall have power in its discretion to provide for the payment of such alimony or other allowance, by the sale of such lands or estate in such manner as the court shall direct; and that any circuit court in chancery shall have authority to review any decree of said court allowing alimony, on petition of either party, and may alter or amend such decree whenever such court shall from evidence become satisfied that any error occurred in estimating the amount of the property, at the date of such decree, of the husband decreed to pay alimony, and for any cause arising after the date of such decree. (*See notes.*)

Sale of real estate for payment of alimony.

Review of decree.

§ 6248. SEC. 28. After a decree for alimony or other allowance, for the wife and children, or either of them, and also after a decree for the appointment of trustees, to receive and hold any property for the use of the wife or children as before provided, the court may, from time to time, on the petition of either of the parties, revise and alter such decree, respecting the amount of such alimony or allowance and the payment thereof, and also respecting the appropriation and payment of the principal and income of the property so held in trust, and may make any decree respecting any of the said matters which such court might have made in the original suit. (*See notes.*)

Court may alter decree for alimony, etc., on petition.

An order for the payment of alimony is not such original process as need be served within the territorial limits over which a municipal court has jurisdiction: *Edison v. Edison*, 56 Mich. 185.

A decree for alimony by a court with jurisdiction, cannot, if not appealed from, be impeached in a proceeding to reach the proceeds of goods fraudulently transferred by the defendant: *Reeg v. Burnham*, 55 Mich. 40; *Storrs v. Storrs*, 58 Mich. 55.

Where the testimony shows a defendant to be worth from \$10,000 to \$15,000, which complainant helped to accumulate, held, that the sum of \$4,500 awarded to her as permanent alimony was not excessive: *Berryman v. Berryman*, 59 Mich. 608.

Alimony awarded plaintiff in the case of *Rea v. Rea*, 53 Mich. 40, was not intended to and did not interfere with her dower right in her husband's lands. A mortgage given on real estate by the husband to raise money to pay alimony cannot be deducted from the premises before the assignment of such dower: *Rea v. Rea*, 63 Mich. 257.

Where the proofs show that, at about the time a bill for divorce was filed, the husband was the owner of several parcels of land of considerable value, and was possessed of considerable personal property, and of an interest in his father's estate, worth at least \$7,000, an award of \$2,000 permanent alimony is reasonable: *Reed v. Reed*, 86 Mich. 600.

§ 6248. *Modifying decree as to allowance, etc.*: See *Brown v. Brown*, 22 Mich. 246; *Perkins v. Perkins*, 10 Mich. 426.

This section authorizes the court to change a decree for alimony only on new facts thereafter transpiring, and when they are of such a character as to make it necessary to suit the new state of facts. It was not designed to affect the right of appeal, or to give the court power to review, reverse or modify its own decrees: *Perkins v. Perkins*, 12 Mich. 456; *Jordan v. Westerman*, 62 Mich. 179.

A decree awarding the custody of a child to its mother, and a weekly allowance for its support, will not be subsequently modified upon a state of facts existing at the time of rendering the decree and then known to the petitioning party. Nor will it be changed when no new facts or change of circumstances upon which to found such alteration are set forth: *Chandler v. Chandler*, 24 Mich. 176.

An order opening a decree for permanent alimony for review and modification, is interlocutory and not appealable: *Perkins v. Perkins*, 10 Mich. 425. But an order or decree made under the provisions of this § 6248, modifying the original decree, is final and appealable: *Chandler v. Chandler*, 24 Mich. 176.

Legitimacy of children in case of adultery.

§ 6249. SEC. 29. A divorce for the cause of adultery committed by the wife, shall not effect the legitimacy of the issue of the marriage, but the legitimacy of such children, if questioned, may be determined by the court upon the proofs in the cause; and in every case, the legitimacy of all children begotten before the commencement of the suit shall be presumed until the contrary be shown.

Legitimacy of cases of non-age, etc.

§ 6250. SEC. 30. Upon the dissolution of a marriage on account of the non-age, insanity or idiocy of either party, the issue of the marriage shall be deemed to be in all respects the legitimate issue of the parent who, at the time of the marriage, was capable of contracting.

Legitimacy in case of former husband or wife living.

§ 6251. SEC. 31. When a marriage is dissolved on account of a prior marriage of either party, and it shall appear that the second marriage was contracted in good faith, and with the full belief of the parties that the former wife or husband was dead, that fact shall be stated in the decree of divorce or nullity; and the issue of such second marriage, born or begotten before the commencement of the suit, shall be deemed to be the legitimate issue of the parent who, at the time of the marriage, was capable of contracting.

§ 6252. SEC. 32. *Repealed P. A. 1883, Act 24.*

Cohabitation after divorce, how punished.

§ 6253. SEC. 33. If any persons, after being divorced from the bond of matrimony for any cause whatever, shall cohabit together, they shall be liable to all the penalties provided by law against adultery.

Who may exhibit bill to annul marriage, in case of non-age.

§ 6254. *Am. S. L. 1847, Act 105; 1848, Act 150.* SEC. 34. A bill to annul a marriage on the ground that one of the parties was under the age of legal consent, may be exhibited by the parent or guardian entitled to the custody of such minor; or by the next friend of such minor; but in no case shall such marriage be annulled on the application of a party who was of the age of legal consent at the time of the marriage, nor when it shall appear that the parties, after they had attained the age of consent, had freely cohabited as man and wife. (*See notes.*)

In case of idiot or lunatic, who may exhibit bill.

§ 6255. SEC. 35. A bill to annul a marriage on the ground of insanity or idiocy, may be exhibited by any person admitted by the court to prosecute as the next friend of such idiot or lunatic. (*See notes.*)

When lunatic may exhibit bill, and when nullity not to be decreed.

§ 6256. SEC. 36. The marriage of a lunatic may be also declared void, upon the application of the lunatic, after the restoration of reason; but, in such case, no sentence or nullity shall be pronounced, if it shall appear that the parties freely cohabited together as husband and wife, after the lunatic was restored to a sound mind.

When nullity not to be decreed in case of force or fraud.

§ 6257. SEC. 37. No marriage shall be annulled on the ground of force or fraud, if it shall appear that, at any time

§ 6254. See §§ 6209, 6224: *People v. Slack*, 15 Mich. 201.

§ 6255. Insanity as a cause, etc., *Teft v. Teft*, 3 Mich. 68.

§ 6257. See §§ 6224, 6225, 6234: *Leavitt v. Leavitt*, 13 Mich. 457.

A bill to annul a marriage for gross duress was sustained where the marriage had never been recognized and complainant was an unworlly youth of eighteen whom defendant had brought before a justice on a charge of bastardy and who, though protesting his innocence, had been frightened by the justice into a marriage on the spot: *Smith v. Smith*, 51 Mich. 607.

• In construing § 6257 of How. Stat., see *Sissung v. Sissung*, 65 Mich. 168.

before the commencement of the suit, there was a voluntary cohabitation of the parties as husband and wife. (*See notes.*)

§ 6258. SEC. 38. If there shall be any issue of a marriage, annulled on the ground of force or fraud, the court shall decree their custody to the innocent parent, and may also decree a provision for their education and maintenance out of the estate and property of the guilty party.

Issue of marriage annulled on account of force or fraud.

§ 6259. SEC. 39. A suit to annul a marriage, on the ground of the physical incapacity of one of the parties shall only be maintained by the injured party, against the party whose incapacity is alleged; and shall, in all cases, be brought within two years from the solemnization of the marriage.

For physical incapacity, suit to be brought within two years.

§ 6260. *Am. P. A. 1883, Act 155.* SEC. 40 [39]. No decree of divorce shall be made solely on the declarations, confessions, or admissions of the parties, but the court shall require other evidence of the facts alleged in the bill for that purpose, but either party may, if he or she elect, testify in relation to such facts: *Provided, however,* That the testimony of either party to the action shall be taken only in open court, and that such testimony shall not be received in support or in defense of a charge of adultery. (*See notes.*)

Decree not to be made on confession.

Parties may testify. Proviso.

§ 6261. SEC. 41. In any suit brought for a divorce on the ground of adultery, although the fact of adultery be established, the court may deny a divorce in the following cases:

In case of adultery, court may deny divorce in certain cases.

First, When the offense shall appear to have been committed by the procurement, or with the connivance of the complainant;

As to connivance.

Second, When the offense charged shall have been forgiven by the injured party, and such forgiveness be proved by express proof, or by the voluntary cohabitation of the parties, with the knowledge of the offense;

As to cohabitation.

Third, When there shall have been no express forgiveness, and no voluntary cohabitation of the parties, but the suit shall not have been brought within five years after the discovery by the complainant of the offense charged. (*See notes.*)

Time suit to be brought.

§ 6260. Not granted on confessions merely: *Sawyer v. Sawyer*, Walk. Ch. 52-3. But confessions, when corroborated, may be received: *Id.* See also *Dawson v. Dawson*, 18 Mich. 335. Nor by consent: *Robinson v. Robinson*, 16 Mich. 79; without evidence: *Id.* Uncorroborated declarations and confessions of a *particeps criminis*, not sufficient: *Emmons v. Emmons*, Walk. Ch. 534.

As to evidence, See § 6228, subdivision 1, note. Testimony drawn out by leading questions, unsatisfactory: *Richards v. Richards*, 48 Mich. 530. See also chancery rule 99, and prior to the amendment of 1883 to this § 6260, *Hamilton v. Hamilton*, 37 Mich. 605-6; *Stuart v. Stuart*, 47 Mich. 556.

The guardian of an infant defendant in bill to annul a marriage, cannot bind her by his admission that she procured the marriage by fraud: *Cooper v. Mayhew*, 40 Mich. 523.

Physicians cannot testify in a divorce suit to what they have found out by compulsory examination of a party thereto: *Page v. Page*, 51 Mich. 89.

A circuit court commissioner, in taking the testimony of parties to a divorce suit, can refuse to take anything which is grossly improper if he is left to act in the absence of the judge: *Id.*

Where the record in a divorce suit contained evidence that was grossly improper and ought, in the discretion of the trial judge, to have been rejected, it was stricken out by the supreme court and the case was heard on what remained: *Id.*

A woman claiming to be married, and seeking a divorce, cannot be examined as a party except in open court, without defendant's consent, whether she is really his wife or not: *Cross v. Cross*, 55 Mich. 280.

§ 6261. Condonation of the alleged cause of divorce, defeats it: *Porritt v. Porritt*, 18 Mich. 425-6.

SUBDIVISION 3.—Eighteen years' delay in suing a husband for support, where the wife is living apart from him, is fatal to the suit, even if the wife originally left him for cause: *Reed v. Reed*, 52 Mich. 117.

Court may decree support, though divorce from bed and board be not decreed.

§ 6262. SEC. 42. In case of an application for a divorce from bed and board, although a decree for such divorce be not made, the court may make such order or decree for the support and maintenance of the wife and children, or any of them, by the husband, or out of his property, as the nature of the case may render suitable and proper. (*See notes.*)

Decrees for divorce from bed and board may be revoked.

§ 6263. SEC. 43. When a decree of divorce from bed and board, forever, or for a limited time, shall have been pronounced, it may be revoked at any time thereafter, under such regulations and restrictions as the court may impose, upon the joint application of the parties, and their producing satisfactory evidence of their reconciliation.

When certain questions shall be asked in taking testimony.

§ 6263a. *Added 1887, Act 137.* SEC. 44. In all suits for divorce, if any of the testimony in the case is taken before a circuit court commissioner, or by stipulation before any other officer, it shall be the duty of such commissioner, or other officer, to ask of each and every witness sworn by and before him in such cause the following question [questions] which shall be reduced to writing in the testimony: "Do you know of any fact, matter or circumstance, which will in any way tend to weaken complainant's case for divorce? If so, state the same particularly and fully;" and the answer of the witness to such question shall be reduced to writing by the said commissioner, or other officer, *verbatim* as far as possible, and the question and answer shall be returned to the court with the other testimony in the case.

What bill of complaint shall set forth.

§ 6263b. *Added Id.* SEC. 45. Every bill of complaint filed shall set forth the names and ages of all children of the marriage, and when there are children under fourteen years of age a copy of subpoena issued in the cause shall be served upon the prosecuting attorney of the county where suit is commenced, and it shall be the duty of said prosecuting attorney to enter his appearance in said cause, and when, in his judgment, the interests of said children or the public good so require, he shall introduce evidence and appear at the hearing and oppose the granting of a decree of divorce. For every case which the prosecuting attorney contests by and with the consent of the court he shall receive the sum of five dollars, to be paid by the county treasurer upon the certificate of the circuit judge that such services have been performed: *Provided*, That nothing in this act contained shall be construed as preventing prosecuting attorneys or their partners from acting as solicitors or counsel for either party to the suit. And in case a prosecuting attorney shall be in any way interested as solicitor or counsel for either of said parties it shall be the

In case of children under 14, prosecuting attorney to appear for.

Compensation of prosecuting attorney.

Proviso.

§ 6262. Equity has no jurisdiction in case of a bill filed for alimony merely: *Peltier v. Peltier*, Har. Ch. 19. See §§ 6291-3.

As to allowing alimony where a divorce *a mensa* is denied. See *Chaffee v. Chaffee*, 15 Mich. 184; *Skilman v. Skilman*, 18 Mich. 458; *Cooper v. Cooper*, 17 Mich. 205; *Bishop v. Bishop*, 17 Mich. 211.

A bill for the support of the wife, separate from the husband, will only be sustained when the reasons for it are imperative. If from the evidence the court is satisfied the difficulties between the parties are not serious, the bill will be dismissed, especially where there are young children for whom they ought to provide a home: *Davison v. Davison*, 46 Mich. 151.

§ 6263b. As to duties of prosecuting attorney, where there are children under fourteen years of age, and payment of fee therefor: See *Willcox v. Hosmer*, 83 Mich. 1.

duty of the court to appoint some reputable attorney to perform the services of prosecuting attorney, as provided in this act, who shall receive the compensation provided for such service. (*See notes.*)

§ 6263c. *Added Id.* SEC. 46. The court granting a decree of divorce may provide in such decree that the party against whom any divorce is granted shall not marry again within such time as shall be fixed by the court, which time shall be set out in the decree: *Provided*, That such time shall not exceed the period of two years from the time such decree is granted. And in case any person shall marry contrary to the time set out in such decree said party shall be deemed to have committed the crime of bigamy and shall be subject to the pains and penalties therefor.

Court may fix the time in which remarriage shall not take place.

Proviso as to limit of time and penalty for violation.

SUGGESTIONS TO JUSTICES OF THE PEACE AND MINISTERS OF THE GOSPEL IN REGARD TO THE SOLEMNIZATION AND RETURN OF MARRIAGES IN MICHIGAN.

A thorough knowledge of the law concerning the solemnization and return of marriages in Michigan is necessary for the proper performance of the duties of persons authorized to solemnize marriages. The following remarks call attention to some of the more important features of the law, which, as shown by experience, are most likely to be disregarded.

Jurisdiction. While any minister of the gospel who has been ordained according to the usages of his denomination, and whether a resident of the State or not, has the right to solemnize marriages in any part of the State, it should be remembered that justices of the peace can exercise such power only in the counties in which they were chosen.

No marriage ceremony should under any circumstances be performed without a license, properly issued by the county clerk. It is necessary also that the license be issued by the clerk of the county in which either the man or the woman resides, or, in the case of non-residents, by the clerk of the county in which the marriage is performed. The penalty for performing a marriage ceremony without the warrant of a properly issued license is a fine of one hundred dollars, or, in default of payment thereof, imprisonment in the county jail for a term of ninety days. The license to marry can only be procured from the several county clerks, but the affidavit necessary to procure the same may be made before any person authorized to administer oaths, and blank affidavits can be had from any county clerk or from the office of the Secretary of State.

No marriage should be performed in which either of the parties is under legal age. The legal age of marriage is for males eighteen (18) years, and for females sixteen (16) years. Marriages in which one or both of the parties are below legal age are not necessarily void, but are voidable, and the clergyman or magistrate who performs the ceremony in such a case is, upon conviction, liable to imprisonment in the county jail for not more than one year, to a fine of not less than fifty nor more than five hundred dollars, or to both such fine and imprisonment. County clerks are instructed not to issue licenses to persons under the legal age, but occasionally such licenses are issued. The clergyman or magistrate to whom they are presented should refuse to perform the ceremony, since the county clerk cannot authorize him to perform an unlawful act. Neither is the consent of a parent or guardian to the marriage of a female under eighteen years of age, as required by public acts eighteen hun-

dred ninety-five, act two hundred forty-three, to be taken as consent to the performance of a marriage ceremony in which the bride is not of the full age of sixteen years. Such parental consent applies only to females between the ages of sixteen and eighteen years.

The consent of a parent or of the legal guardian must have been filed with the county clerk if the bride be under the age of eighteen years. A place is now provided on each license for the insertion of a statement by the county clerk to the effect that the law has been complied with in this respect.

Return duplicate certificates promptly to the county clerk within ten days after the ceremony, as required by law. Neglect to do so renders the clergyman or magistrate offending liable to a fine of not to exceed one hundred dollars, or to ninety days imprisonment, or to both fine and imprisonment. Persons married should take pains to ascertain, by inquiry at the county clerk's office within a reasonable time, that the person who performed the ceremony has complied with the law.

Be particular to require the signatures and places of residence of two (2) witnesses, and also to sign your proper official title, as clergyman, or justice of the peace, in certifying to the performance of the ceremony.

Copies of the pamphlet containing the laws relating to marriage can be obtained by application at the office of the Secretary of State.

